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THE
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THE MONTH.

MR. GLADSTONE was supposed to be shelved by the last election, when he earned his defeat by proposing to relieve the middle and higher classes from the income tax, and throw the whole burden of taxation upon all classes equally. But his genius has shone the brighter for the shocks and rubs of adversity; he has been more originative in starting discussion than ever before. His opposition to the absurd Church Bill, which Disraeli and an exasperated majority hurried through Parliament, taught one wing of the Church where their true friend was. And now he lets the other, the fiercely Protestant party, see that he appreciates their position and can state their (theoretical) case, with a power of conviction and of eloquence that their idol and his rival has no claim to.

His pamphlet, *The Vatican Decrees in their Bearing on Civil Allegiance*, is not a proposal to inaugurate any change in the policy of England or of the English Liberals towards the Roman Catholic Church. Mr. Gladstone rejoices in all that has been done to relieve his Roman Catholic fellow-citizens from disabilities, and give them equality before the law. Whatever remains to be done to that end he is willing to help in doing. But his pamphlet is "an expostulation" with his fellow-subjects of that faith. He urges—in view of recent conversions in high places—

that no Englishman can enter that church "without renouncing his moral and mental freedom, and placing his civil loyalty and duty at the mercy of another." He regards every patriotic Englishman who embraces the Roman Catholic creed, as defined by the Council of the Vatican, as having placed himself in a false position. He has two masters, whose commands will be sure to differ and clash, and he cannot serve both. Either he will virtually give up his English birthright and become, as Lord Acton defined himself in the House of Lords, "an Englishman if you will, but first of all a Catholic," or he must put himself into a position of disobedience to an authority that he regards as the channel of a divine wisdom, whenever Rome says one thing and England another.

The pamphlet has already called forth several replies,—one from Gladstone's relative, Archbishop Manning—another from Monsignor Capel—a third (not in that form) from the Pope himself. It is easy to see what the effective line of argument in reply is. Roman Catholics differ from other Christians and from all theists, not in believing that there is an authority higher than that of the State, and before whose demands allegiance to the State must give way, but merely in holding that this authority is more definite and tangible, and its decisions more easily and directly ascertained. Every man who believes in a God, whose will is revealed either in the primary moral instincts and intuitions, or in a written revelation, or in both, must necessarily believe in a higher law, in obedience to which it may be necessary to disobey the law of the State. Does not Mr. Gladstone serve two masters? Is he quite sure that their commands will never clash? "True," he would answer, "but the two masters to whom I object are co-ordinate political powers within the State system of Europe. They have hostile policies, one of which I hold to be clearly retrogressive and unrighteous, and I think that any man who gives an honest attention to the facts must see as much. I appeal to enlightened Englishmen whether the demands and policies of Rome are such as commend themselves to their consciences as absolutely right." Which brings the matter to a question of fact between the two parties.

The true issue lying behind all seems to us to be this: "Did the Vatican Council's definition of the Pope's infallibility merely

declare that the Pope possessed, when speaking *ex cathedra*, the power to decide all questions of dogma? That is, did it declare that he possessed the authority which was previously defined as inhering in a General Council presided over by the Pope himself? Or did it declare him infallible both as to law and fact—both as to dogma and the special cases arising out of its practical application?" Mr. Gladstone is perhaps bent on forcing an answer to this question. If the answer be the one we have last suggested, then the argument seems to us a very strong one. If it be the other, then the position of English Catholics, as regards the civil power, has undergone no essential change in consequence of the Vatican Council's decision. They are still free to resist the commands of the Pope where they clash both with civil allegiance and conviction of right—free as their Catholic fathers were to extort Magna Charta in the face of a bull of excommunication—free as the Catholic Lord Percy of Effingham was to lead the English fleet against the Armada, whose banners a Pope had blessed.

If there is one British official whose position is unenviable, it is the finance minister for India. To carry on an extremely expensive, because dangerous government, where the people hoard away the millions they get for raw produce, and where officials hoard up their salaries to carry back to England, and that in a country that has no manufactures, a lifeless trade and a starved agriculture, is no easy problem. A very plain solution might seem to be the levying high duties upon foreign imports, as a means to bring large revenues to the treasury, to give employment to the labor that runs to waste, and to bring back to life the murdered manufactures of the country. Such a proceeding would be a thing of course were there not a "science" and a theory that forbids it; free trade being the first law of nature, all things must conform to it.

During the months that followed the suppression of the mutiny, the direction of Indian finances fell into the hands of some thick-headed routinist at Calcutta. We have tried to learn his name, that we might hand it down in ignominy, and failed. The poor fool thought that the government of India might as well be carried on for the benefit of the natives; that there was no need of

sending Indian cotton round the world to be woven and spun—let them do it at home ; that if India needed railroads and had millions of excellent iron ore on the surface, square miles of good coal not far below it, it would not be a bad idea to set some of these idle Hindoos at work to make iron rails. So he put on protective duties, and the people actually began to make what they had been buying, without seeing the loss involved in employing idle hands at home. Fortunately this stupidity was knocked on the head. Jas. Wilson, editor of *The Economist*, a great light of the Cobden school, went out to India at Palmerston's request, and his first proceeding was to cut down the tariff and stop the home manufacturing. It might have been thought that this was a gain forever ; if ever a country had the light of "the science" to steer its financial course and bring it prosperity, India was that country. But India has not prospered ; taxes fall heavier and heavier ; as the Earl of Mayo declared, they form the greatest and the lasting source of native dissatisfaction with British rule. And no wonder. They are levied to pay high salaries, mostly to English office-holders, who carry the money out of the country, while the old native office holders spent it at home. They are levied upon an agricultural country, whose manufactures—once vast in extent and marvelous in the quality of their productions—have been crushed out by foreign competition. They take the shape of government monopolies of some of the articles of prime necessity, such as salt, most needed by a rice-eating people of all peoples. Salt is worth £34 a ton, not very far inland in India. It has been argued that the tax on it does not press heavily on the people, for the average consumption in Bengal, Orissa, etc., for every person is much the same as the allowance made to the convicts in Indian prisons and the soldiers in Indian armies. The recent census has completely upset these calculations by showing that the estimates of the population upon which they were based fell far short of the facts, that some districts were twice as densely populated as was supposed, and the mistakes thus corrected were not matters of hundreds and thousands, but *hundreds of millions*.

That sort of indirect taxation has manifestly reached its limit in India. The direct taxation of the land reached its limit long ago, and is more oppressive than that of the native governments which preceded England. Nothing is left but heavy duties upon

imports, and to these Indian financiers have again had recourse. Unhappily the new enactment was not accompanied with an equal tax upon native manufactures, and the perverse natives—under the captainship of English capitalists—are actually treating the new tariff as a protective one, and again going at the work of manufacturing cotton goods for themselves. They make no great quantity of them, to be sure, but the native Indian has simplified the clothes question to such a degree that he needs but little. And so Manchester finds the balance of trade falling still more heavily against her. Indian cotton she must have, and the Hindoo will not buy enough “cheap and nasties” to pay for it. He never did do it; he does less now than ever.

Manchester has sent up a deputation to Lord Salisbury, Secretary of State for India, to ask that the duties be taken off. “Very sorry,” says his lordship, “if they act as a protective tariff; but I can’t give up the £800,000 a year they bring me; I have no surplus to fall back on. But even if they were taken off the natives would go on spinning and weaving. [‘We would see about that,’ says Manchester, *sotto voce*.] They grow the cotton, they have labor in plenty and quite suitable. They want nothing but coal and capital, and now, also, we find 17,000,000 tons of coal or thereabouts, in one neighborhood. That they have begun manufacturing, shows that they are not without capital.”

The best protectionist comment that could be given, is that of *The Spectator*: “We believe this argument will, some years hence, prove sound; but as yet, while coal is dear, communication not perfect, and the habit of manufacture, on the great scale, not formed, there is this fallacy in it. The import duty pretty nearly represents the local manufacturer’s profit, in excess of the interest he could get, without exertion,” *i. e.*, as a money lender, mortgagor of the farms of the poverty stricken ryots, &c., &c. “Abolish the duty, and the mills would first languish and then stop, as the native manufacturers did.” If the editor of *The Spectator* were finance minister for India, would he abolish the duties?

IN France there has been a rest between the convulsions. McMahon urges in his message an abolition of the stage of siege, but the timorous minority who rule France, or who rather prevent it

from being ruled, dare not make a change, even such a just and imperative one as this. The tendency among the elections is still republican, but the parties are as much as ever in the mutual position of the uncles and nieces in the Critic. The Prince Imperial has been reported as about to marry a daughter of the Czar, who has no existence, and the Spanish difficulty is ended by the adoption by the French of greater precaution along the frontier: the tone of Serrano's complaint having been given a proper rebuke, the injuries which called it forth have been remedied.

BISMARCK's happy faculty of throwing his insolence into the scales at the right time, has perhaps been drawn on too far during the last month, and what was to be accomplished by provoking or even in successfully crushing a power like Von Arnim, is not clear to an outsider. Nor is the triumph by any means assured. Fighting the Pope and tramping on Alsace-Lorraine, are a different matter. How hateful ultramontaniam has made itself is shown by nothing more clearly than by the fact that in its struggle with German brutality, we can give it no sympathy. The moral of the Alsace story is among other things to point the indifference, insensibility, or whatever one may chose to call it, of this special period. No soul seems stirred by the wrongs of these wretched provinces. The partition of Poland and the subjugation of Lombardy and Venice, were in their day very differently received. The New York *Herald* draws a comparison as good as most historical parallels between Bismarck's policy and Strafford's "Thorough," and this is about all.

DISGUST with Washington officials has grown on the part of the independent press to be such an old story, and since the election requires so little courage to express, that the fewer words the last revelation is dismissed in the better. Mr. Mullett, whose title, whence bestowed being a problem, is that of Supervising Architect, has been foolish enough to fly into a pet because the new Secretary of the Treasury, who apparently is his superior officer, pressed an inquiry begun by Secretary Richardson, but withdrawn when Mr. Mullett had expressed his dislike for being inquired into. As Charters, having escaped punishment for all the offenses he had committed,

died under an imprisonment for one which did not go beyond an attempt, so the Supervising Architect, having had entirely his own way in the spending of millions in a sphere whither the law which confines expenditures within the limits of an appropriation, evidently did not extend, fell because of his having no reason to give as to the disposal of a few thousands. No one felt enough interest to ask under what authority the gigantic post-office of New York was being erected, or who had the right to lay bare a block in the heart of Philadelphia; but when the office furniture in Washington was irregularly manufactured, Gen. Bristow interfered and the nation lost Mullett. Mr. John McArthur, Jr., of Philadelphia, has been appointed the new government architect, and it would be mere justice to him for Congress to define functions which his predecessor exercised without the slightest regard to law or Congressional action.

THE safe burglary case, which has been dragging its way through the newspapers for months, has come to even a more abortive end than was anticipated. That the jury dishonestly selected, at any rate unfairly constituted, would not condemn the prisoners, every one believed, but it now turns out that as to three of these prisoners (indicted, as our readers know, for a conspiracy to get up a false accusation of burglary against Mr. Alexander, of Washington, obnoxious to a portion of the District of Columbia rulers), the process was invalid, owing to the way in which the grand jury was chosen. The larger rogues will probably escape, and whether the smaller ones can be held is doubtful. The disagreement of the petty jury does not, however, prevent a new trial being had, provided any of the accused can be brought without the sphere of the procedure of the illegal grand jury. In the Beecher matter the public sought refuge in legal proceedings when sickened with an investigating committee; here, however, the only hope is by the converse step.

THE Forty-third Congress has assembled for its second session under circumstances of extraordinary interest. For some reason or other—hard times, inflation, southern interference, or a genuine conversion—as the purpose of this paragraph is a catholic address to the public in general, we leave our readers to take their choice—

the political horizon has brightened for the Democrats. It cannot, therefore, be considered altogether a miracle, that the proceedings in opening both the Senate and the House were less exuberant than usual. There was so much less of hardy assurance on the part of the majority, and so anxious a circumspection on that of the hopeful minority, that all the papers have to tell us is of the style, wind and limb of the war-horses. With the sad tone of Bernard of Clugny, the *New York World* announces a caucus to be held by the Republicans. The correspondent "with one auspicious and one dropping eye," leaves it on the reader's mind that there is to be at least one more caucus in our history. Somewhat farther down, Bernard lets us know that Representative Wood, (Fernando) has invited his friends of the Senate and House to celebrate the Democratic victories at his abode. Probably there will be other of these social gatherings, but none need be expected from Gen. Butler, who, defeated among other things, as he informs us, by his devotion still unchanged to woman, is determined to withdraw from public life and practice his profession.

The stillness of the occasion was varied by the reading of the President's message, to which every one listened attentively, and about which no one at the time seemed to have any opinion. This statement ought to be qualified by the remark that New Jersey has the honor of a Representative who slept through everything but the opening of the Message, and the Pennsylvania Democracy can boast of one who expressed his sublime hostility to the administration by putting a cigar in his mouth, and his heels on the desk. It is to be hoped that Congress, in the bulk, is of different material, and better fitted to discuss the important questions in store for it. It will not be easy to preserve the reputation of a witenagemote in choosing between the various propositions to legislate the country rich. How hard to decide between the varied charms of Judge Kelley's 3 65-100 convertible bond, and the sublime self-satisfaction of determining how much money the country can spare each month to be burned, or on the other hand, just how much more ought to be issued to move the crops. Then there are to be considered the claims for admiration of the Canutes, who think Congress might as well try to regulate the tides by statute.

There is, in all seriousness, one subject of delicacy and import-

ance to be treated by Congress—the troubles in the Southern States. The President, in his message, has referred the matter to them in most manly style. In the meantime, while he remains the Executive, he promises that the amendments to the constitution, and all legislation thereunder, shall be enforced with vigor, and none can doubt that it is his duty to do so; an unpleasant one, from which he would gladly be relieved, to which end he recommends Congress to inquire narrowly into all alleged outrages, and to ascertain whether and how far they are true.

THE smoke having lifted from the field, we can now approximately measure the extent of the Republican defeat. In the first place no visible effect has been produced upon the President, to whom, possibly without authority, the reports ascribe a number of remarks equally foolish and in bad taste, to the effect that Congress and not he is to blame for the result. Some of this cannot but be bravado, and whether he be conscious of it or not, he will not, in the nature of things, insult us again with such appointments as he tried upon us in the past. The "Civil Rights Bill" is conceded not to have survived the late catastrophe, and the outrages at the South are as worn out as Barrère's Carmagnole. The Republicans at Washington are shown to be bankrupt of their whole stock in trade, and when asked to go into caucus, answer, "What is the use? we agree about nothing." The Democrats, with as little policy or principle, except of an entirely negative kind, as their adversaries, have shown so far, at least, as their New York leaders are concerned, a moderation which would suggest a great reserve of strength, and which has won very general commendation.

THE local elections of Philadelphia, which take place in February, are being prepared for, and another effort to purify them is being made. A committee of fifty-eight, representing the Union League, a committee of the Law Association and the Reform Association, are at work, and the prospect of success is better than pessimists among us are willing to allow. Like all others in this direction, the spasmodic character of the attempt is its chief evidence of weakness. How much, if anything, will be accomplished, cannot now be predicted. That the party

conventions have been postponed, is looked upon as a good sign, showing that a slate has not been ready from the beginning, and that capacity and respectability may have a voice in the nominations.

ON the first of January the new Courts of Common Pleas and the new Orphans' Court for Philadelphia open. Hitherto there have been three sets of tribunals—the Supreme Court of the State sitting at *nisi prius* with a very general jurisdiction, both at common law and in equity, over controversies where the amount involved was five hundred dollars or over; the Common Pleas having a general jurisdiction over controversies where the amount involved did not exceed five hundred dollars, and over certain subjects exclusively, as lunacy and divorce; the District Court having a general jurisdiction corresponding to that of the Supreme Court at *nisi prius*, where the amount involved was a hundred dollars or over. The Orphans' Court and the Criminal Courts have been filled by the Judges of the Common Pleas. The former, from the 1st of January, will be a separate court. The latter remains unchanged. After this date the *nisi prius*, except for one or two special subjects, is abolished. The District Court and the Common Pleas are merged, and four new Courts of Common Pleas, with three judges in each, with a prothonotary and calendar of cases in common, and each taking its turn in holding Quarter Sessions and Courts of Oyer and Terminer, but in every other respect independent of each other, will be the result.

There can be no doubt that the New Constitution has provided the means for effectual reforms in the business of the law as it is administered here. The reduction in the number of courts and an increase of the number of judges ought to expedite business and save a great loss incidental to delay in litigation. The next thing to having law made certain is to have it made speedy. The abolition of the excess of court clerks and other officials, and the change from living by fees to salaries, cannot but reduce the immense sums now taken from parties engaged in litigation and the taxpayer, and instead of this indirect encouragement to dishonesty, give us good officers working on their salaries. But all of these reforms would be of little lasting value if law-suits are to be made so cheap that the courts will be flooded with matters of

small amount in value or questions of little importance even to the parties in interest. To prevent this there ought to be such legislation as will give to the new police magistrates a large jurisdiction over matters both civil and criminal, and appeals to the courts ought to be made only upon such terms as to costs as will prevent the wretched spectacle now exhibited of petty suits for debt or two-penny charges of assault and battery, dragged about from an alderman to a judge, with as much consumption of time and money, both of the public and of the parties concerned, as if a man's reputation or liberty were at stake. Yet, with the kind of aldermen now abusing judicial functions, it would be unsafe not to provide escape from their law.

In abolishing the existing system of aldermen,—a relic of a time when offices sought good men and found them—the duty is put upon all parties of selecting very good men for police magistrates. It is not only due to every class of citizens that their causes should be promptly heard and legally settled, but it is due to the public that the time of the judges and the business of the courts should not be weighted down with the cost of cases that are now taken into the civil side of the Common Pleas, where juries are kept for hours listening to learned arguments about sums in dispute from five dollars up to a hundred. A sensible, honest magistrate would settle the question in much less time, and much more to the advantage of the parties in interest. So, too, in the Quarter Sessions, there are lists counting by the hundred, of cases of the most trifling offenses, coming within the purview of the criminal law, in which the learning of the Bench, the eloquence of the District Attorney, and of the lawyers who make that court their special field of display, and the time of the jurymen, are all consumed in trying to find out who struck one of two contending street brawlers, or some other equally vital question. Of course, when the matter of costs is once out of the way, when magistrates, clerks of court, District Attorney and all others are duly paid by salaries, there will be a strong inducement to compel litigants to come to an early settlement of their difficulties; and as we are about to come into the new system of official salaries, we may look forward to very real reforms. The question of good magistrates is therefore bound up with the extent of a reform and increase in their jurisdiction. London, with its three millions of

inhabitants, has both civil and police magistrates with very large powers, and justice is administered by them promptly and satisfactorily. Content with living salaries, devoting their time to the business entrusted to them, rewarded by the confidence of all classes who come before them, aided by fair counsel, there is no reason why here, in Philadelphia, we should not inaugurate a similar system, saving the immense sums now wasted in litigation in court by the parties, and the repeated drafts made on the city treasury, as well as the loss inflicted upon third persons who are summoned as witnesses and jurymen to waste hours and days that would otherwise be devoted to their own business. The whole class of bail-brokers and court-runners would be swept away, and a far-reaching corruption would be at an end forever. Our judges would have all their time left for the business which properly requires their ability, and their courts would dispose of that business to the infinite satisfaction of litigants. How best to secure such legislation, where to procure the draft of such a law as shall meet the evils we have pointed out and provide a suitable remedy, are matters that can best be discussed by the judges themselves, aided by lawyers of ability and experience upon whom they can safely call. The Law Association of this city embraces all the judges and a long list of our foremost lawyers among its members, and they could not do the public a better service than to take the initiative in this matter.

JOHN M. READ, late Chief Justice of the Supreme Court of Pennsylvania, has very recently died. He filled the various and honorable positions of City Solicitor, United States District Attorney, Attorney-General of the State, and for fifteen years that of a Justice of the Supreme Court of this State. He was a very experienced politician, and an early and thorough-going member of the Republican party. In matters of local interest his knowledge was singularly complete and accurate, and his learning as a judge, though not covering a wide field, was, especially in case law, certainly great.

MAYOR HAVEMEYER, of New York, has also died and very suddenly. He was the first Reform mayor, undoubtedly honest, and in many ways capable. He was, however, self-willed and intractable

to an extent which almost undid all the good he tried to accomplish, and when he put back into their offices two corrupt police commissioners, he lost the last remnant of intelligent sympathy on the part of the public, and for his defeat by Governor Dix in an official tussle upon the subject of the commissioners just spoken of, no one was sorry. That he did not ruin the Reform movement in New York, is perhaps the strongest evidence of the vitality of the latter that could have been adduced.

THE First Troop of Philadelphia City Cavalry has just celebrated its centenary. Its first captain was Mr. Abraham Markoe, and just prior to and just after the battles of Trenton and Princeton, it did what was granted at the time as very creditable service. It has for a little while been out in every war since, but as a body has never accomplished much, its members scattering themselves among regiments especially organized for the particular campaign. Its history and good name are however a proper subject for no slight degree of local pride, and should receive that regard which is claimed by the few things connecting us with our past.

SINCE our last number Miss Cushman has taken farewell of the stage, and has received a series of what the newspapers delight in calling "ovations." Though criticism is out of the province of this portion of the magazine, we ask permission for saying a few words, which may do for another to be added to the heap of her garlands.

It is a pleasant thing to see one of Robertson's comedies acted by Marie Wilton's company, but it is a Chinese-like reproduction of every-day life. The jokes are the jokes of the club and of men who read the *Saturday Review*—the sentiment is the sentiment of the people who are rather ashamed to care very much about anything—and the actor is successful in proportion as he can seem to be as impassive as his prototype would be in good society. The impersonation of such a character as Meg Merriles by Miss Cushman is something different in kind rather than in quality. The art is as consummate, but vastly more difficult. There is an ideal to be formed, as well as to be reproduced—and, when formed, it is a very difficult thing to realize. Consistent as is Miss Cushman's portraiture of the old gypsy, from first to last—impressive

as it still proves to be to the oldest theatre-goers, however used to all the tricks of stage business—every one must recognize how readily, in inferior hands, it would sink into burlesque. It admits of no degree in workmanship. It must either be as it is, perfect of its kind, or it would instantly be rejected of gods and men. From her first swift rush upon the stage to the final fall in the supreme collapse of death, there is no pose, nor look, nor gesture, nor intonation which is not in its way faultless. This completeness it is which distinguishes the work of this great artist. She rested not till it was left without flaw. You may quarrel with the theory upon which she plays *Lady Macbeth*, for instance; but let her premises be granted, and what she does and is in the part, follows inevitably and of necessity. In no character, however, is the perfection of her skill more absolute than in *Meg Merriles*, and never has she played it better than on her last evening. Her brief and brilliant engagement has drawn to a close, and she has permanently retired from a pursuit, which is sometimes followed because its labors are a diversion, and the labor we delight in physics pain; but however cordial may be the welcome we shall extend to those coming forward to take her place, we must recognize and admit that her art differs from theirs as the novels of Scott do from those of Trollope—as the outlines of Retsch or the cartoons of Kaulbach from a photograph.

SHALL WE GIVE UP SUNDAY?

THE general civil observance of the first day of the week as a day of rest is one of the national institutions put in peril by the large influx of foreign immigrants, and by the ferment of dissatisfaction with the churches and theologians, who have taken the institution under their patronage. In the city of New York, where foreigners and foreign interests exert an almost preponderating influence, this danger has been especially marked, and the right to devote the day to amusements of every sort is now in dispute between two very large sections of the community—the law being clearly and strongly on the side of those who dispute the

right. The innovation began with concerts of sacred music; then, under the same name, concerts of mixed and even of thoroughly secular music were given; and now it has come to theatres open on Sunday. Against this movement, a large petition to the authorities, signed by many of the wealthiest merchants of the city, and by Lester Wallack, Dion Boucicault, and others of the theatrical fraternity, has been presented, asking for the enforcement of the law.

That this bold defiance of the Sunday laws closely coincide with the victory of the Democratic party in that State, would seem to indicate that its support in repealing the law or in treating it as a dead letter is relied upon. The Democratic party has always been distinguished for large views of individual liberty; a large part of its following consists of the class who regard such laws as an oppression. But we think the hope is a mistaken one. The men recently elected to office in New York, especially the Mayor and Governor, are of the highly respectable, church-going class, and are men with whom the opinion of that class will weigh for much. They will certainly not go out of their way to offend it; and the enforcement of the law is clearly in the line of their duty. At most, they will plead, if the matter be not finally settled before they enter upon office, that they have no choice, and that "the best thing to do with a bad law is to enforce it."

The organs of public opinion are generally with the petitioners, but they nearly all make the mistake of treating the day as a religious or ecclesiastical institution, and taking religious arguments into account. It is from first to last a purely national institution, as was its predecessor, the Jewish Sabbath. The fourth commandment, and indeed the whole ten, were not enjoined upon a church, but a nation, and it is upon social and national grounds that the argument for the legal observance of the day is strongest. The day of rest is useful for the health and sanity of society—more needful in modern than in ancient society—more needful in America than anywhere else in the world—more needful in New York than anywhere else in America. The more rapid and feverish the societary movement, the more needful is this weekly antithesis of rest and quiet. Indeed we might question whether one day in seven is enough. But we think it beyond question that the nation, the commonwealth and the municipality, are any

one of them competent to say through their recognized organs, their respective governments—"We will stop and take breath every seventh day. And as our activities are so interwoven that we can only stop by one and all of us stopping, we will forbid any one not to stop." This agreed to, the question arises as to one or two special classes, whether they are to be exceptional. Society does tolerate such exceptions—milkmen, newsdealers, street-car drivers and conductors, bakers, compositors on Monday newspapers, and others. The true question at issue in New York, is whether the persons employed in places of amusement should form another exception. The best captains of their class in New York say that they should not; and when the exhausting nature of their occupation, the powerlessness of most of them to resist the dictation of greedy managers, and the needlessness of their continuing work, are all taken into account, we think the scale preponderates vastly in favor of enforcing the law against Sunday amusements. Should the law give way on this point, there seems to us simply no line of principle to prevent the restraint being removed in all other cases, and wherever custom or the power of the capitalist is too strong for the individual, the workingman's day of rest will gradually disappear.

THE PIONEER GOVERNMENT OF OREGON.^{1*}

THE commencement of settlement and civil government in the country now comprising the Pacific States and Territories, is an interesting subject, and, as time passes on, and we are

¹ Lieber—*Civil Liberty and Self-Government*. 1st Ed., vol. I., p. 206, and p. 210; and vol. II. p. 21.

"Foreigners frequently express their surprise at the ease with which, in our country, meetings, societies, bodies, communities, and even territories self-constitute and organize themselves," etc., and Mr. Lieber adds in a note, "as a striking instance, may be mentioned the whole procedure of the people of Oregon, when Congress omitted to organize the territory, and ultimately "organic laws" were adopted "until such time as the United States of America extend their jurisdiction over it." They were printed by the Senate May 21, 1846, and form a document of great interest to the political philosopher in more than one respect.

* By an early settler.

removed further from the period in which those events occurred, it will command greater regard and excite still deeper interest. California, invested with the magnificence of her inexhaustible treasure, may be said to have sprung at once, perfect and complete, into the sisterhood of States, so brief was her pupilage. It was different with her compeer, Oregon. There was nothing Minerva-like about the birth of her political sovereignty. She was in several ways, and under peculiar circumstances, an independent offspring. The title to the soil, which had been held in joint occupancy by the United States and Great Britain, was only determined in 1846—years, a complete decade at least, after settlements had been commenced within her borders—and she reached her majority only after a full minority of twenty-one years. Not until that length of time from the first manifestations of political significance in her social life did she assume her position as a State in the Union. There were no discoveries of precious metals to attract the world and immigration to her fertile and secluded valleys. Agriculture, the industry of the husbandman, was to make her wealth—the plow to open up her golden harvests. Oregon has experienced three different characters of government First, the pioneer or provisional, afterwards the Territorial, under the jurisdiction of the United States, and now the superior authority of the State. The first was a government as good and sufficient for all practical purposes at the time of its existence, and as much respected, as either of the others. While the public interests were sedulously subserved, the highest regard was manifested for individual rights. The law has been supreme, its majesty held inviolate always in Oregon, since its first enactment by the pioneers. Wise in its simplicity, potent in the measure of justice and right it embodied and maintained, its fundamental principles were the same as those which sustain the jurisprudence of to-day. Twelve years before California became a State, Oregon was maintaining her settlements in the valley of the Willamette. The first Americans who remained permanently in the country, went there with Captain Wyeth, of Boston, in 1832. Their object was to trap, and trade with the natives for peltries. But upon the abandonment of his enterprise by this gentleman, a few years subsequently, a number of his men became settlers. The brothers Lee and others, of the Methodist mission, reached Oregon in 1834.

The Rev. Dr. Whitman and Rev. Mr. Spaulding, of the "American Board of Foreign Missions," with their wives, arrived in 1836. These ladies were the first white women who crossed the Rocky Mountains, and their children were the first white American children born in the country. The Rev. F. N. Blanchet, now Bishop, with Father Demerse, of the Catholic mission, located there in 1838. The missionaries the world over have been the pioneers. With a love ineffable for their Master's work, and a zeal that the most formidable circumstances have been unable to depress, ready to give up their lives if requisite for the advancement of their holy cause, they press forward, tracking the desert, encountering the perils of disease and savage enmity with invincible fortitude, to extend the blessings of the gospel to the benighted of all lands. What have they not accomplished, apart from their special vocation, for the benefit of the world, in the collection and dissemination of valuable and important information concerning new and unknown countries—as philologists, geographers, geologists, botanists and general historians?

Our purpose in this paper is not to narrate, even partially, the suffering and loss of life incurred in the progress of settlement in Oregon. In this respect it may be sufficient to remark that its history contains a full proportion of the incidents of sacrifice and yielding up of life, akin to martyrdom, usual in reclaiming new and remote sections in an Indian country. Our idea is simply to give a brief account of the process of the formation of civil government on the north Pacific coast. We cannot refrain, nevertheless, from a mere mention here in passing, that after a residence of thirteen years among them, devoted to their education in religion and the useful arts, the estimable Dr. Marcus Whitman and his amiable wife, with others, were murdered, under circumstances of the most revolting cruelty, by the Cayuse Indians, on the 29th of November, 1847. Dr. Whitman did more, perhaps, than any other person to encourage immigration and otherwise forward the interests of the territory wherein he had made his home. His mutilated remains were buried near the place where he fell. No monumental stone records the faithful service and untimely death of a most worthy Christian gentleman.

The first action towards the agreement of any kind of civil rule comprehending the whole community, occurred in February,

1841. It was occasioned by the death of a settler possessed of considerable personal property, who died intestate. There were no human heirs, and no authority to administer upon the estate. It was essential that some proper disposition should be made of the property, which consisted chiefly of bands of horses and cattle. The settlers who attended the funeral held an informal meeting, after the burial, and upon an interchange of views and the appointment of a "committee of arrangements" to take into consideration the whole subject apparently, agreed to meet again on the 17th of the same month. The gathering at Champoeg—a point on the Willamette river, equidistant between the present cities of Salem and Portland—on that date, in the imperfect record left of its proceedings, was called "a meeting of some of the inhabitants of the Willamette Valley for consultation concerning the steps necessary to be taken for the formation of laws, and the election of officers to execute the same, for the better preservation of peace and good order." The business transacted was principally in the nature of an expression of opinion in the recommendation of measures for future action. The "committee of arrangements" made no report and were "advised to propose" the creation of certain offices. The judgment of those present as to who should be elected to fill these offices was manifested in nominating candidates for them.

The meeting adjourned to meet the next day at the Methodist Mission House, which was then located on the right bank of the Willamette river, opposite the present town of Wheatland. This adjourned meeting, on the 18th, was fully attended. The record of it reads, "at a full meeting," etc. The material point to which there was no opposition was the necessity of adopting some kind of laws regulating probate matters. A crude form of government was determined upon. The executive power was dispensed with, or practically intended to be placed in the chief functionary called "Supreme Judge," who was elected by those present. A committee of nine persons were empowered "to form a constitution and draft a code of laws," and report at a subsequent meeting. A "clerk of courts and recorder," a "high sheriff, several justices of the peace and constables" were also elected. "It was then resolved that, until a code of laws be drafted by the legislative committee, and adopted by the people, the Supreme Judge be instructed to act according to the laws

of the State of New York." This public gathering, was larger than at any previously held in the colony, and adjourned to meet on the following first Tuesday of June, "at the new building, near the Catholic Church." This effort at government-making certainly was made to run the gauntlet of the influence of these two missionary establishments, which no doubt was opposed to any further perfection of it. At the meeting in June, not so fully attended as the other, the Committee on Constitution and Code of Laws were called upon to report, when it was announced that they had never met to discharge the duties assigned them. Some withdrew from the committee and others were appointed in their places, and they were directed to report at an adjourned meeting in October following. The committee were also "instructed to confer with the commander of the American squadron, and Dr. John McLoughlin, chief factor of the Hudson's Bay Company, with regard to the forming of a constitution and code of laws for this community." The only practical result of this movement appears to have been the disposition of the estate of the deceased party heretofore alluded to, which was reached to the apparent satisfaction of the community. The Legislative Committee, as it was denominated, differed in opinion as to the expediency of establishing a permanent organization, and the settlers also must have entertained adverse views, as the public meeting to receive the report of the committee was never convened. The truth was, the Americans hoped to be provided with a government by authority of Congress, within a reasonable time, in an abrogation of the treaty of joint occupancy and an extension of the jurisdiction of the United States. They were fearful, at least some were, that matters so materially affecting their own immediate interests might be complicated and prejudiced through injudicious action on their part. The population was composed of the two nationalities, the preponderance uncertain perhaps, or at all events not so determinate as the immigrations of the two subsequent years made it.

While the two home governments were seemingly indifferent, and deferring any positive action as to a settlement of the question of ultimate possession and jurisdiction, the "American camels"—the patient and serviceable oxen—with their lengthened lines of wagons, laden with "the household gods," were annually

conveying across the continent, slowly but surely, through dreary deserts and unfriendly tribes of Indians, the inflexible power that was finally to compel an adjustment of the controversy and supplant the achievement of any especial and distinguished statesmanship in its accomplishment.

The next attempt at instituting a government for the communities of Oregon took place two years later, and was crowned with success; and when perfected still two years later, the system of polity presented to the world by the pioneers of the North Pacific, was the admirable work which worthily received the encomiums of our statesmen, and fulfilled the highest purpose of all good government in promoting the happiness and prosperity of the people. For six years this rule of the pioneers continued, popular and efficient, until changed to the territorial organization by act of Congress.

On the 4th of March, 1843, at a meeting of the colony to provide for the protection of the stock of the settlers from the attacks of wild animals, after completing the business in hand, a committee of twelve persons was created "to take into consideration the propriety of taking measures for the civil and military protection of the colony." At the call of this committee the people assembled at Champoeg on the 2d of May, when the report in favor of organizing a government was adopted. In accordance with the recommendations of the committee, a supreme judge, with probate powers, was elected; also, a clerk, a recorder, treasurer, sheriff, justices of the peace, constables, etc. Nine persons were selected to frame laws, and instructed to report on the following 5th of July. It was agreed to pay them one dollar and twenty-five cents each per day, "the money to be raised by subscription;" and it was raised, the members of the committee subscribing more than the amount of their compensation. The organic and other laws thus prepared were submitted to the people, in mass meeting at Champoeg, on the 5th of July, 1843, and approved after some slight amendment. The fundamental law, or "Articles of Compact," as they were termed, guaranteed the freedom of religious belief, the writ of habeas corpus, trial by jury, "proportionate representation," the maintenance of "good faith" with the Indians, providing for legislation "to prevent injustice being done to them," and for the preservation of peace and friendship. Slav-

ery was prohibited. The executive power was vested in a committee of three persons, to be elected annually. The legislative power was lodged in a committee of nine persons, to be styled "Legislative Committee," and chosen each year. The judicial power was placed in a supreme, probate and justices' courts, the first to consist of a supreme judge and two justices of the peace. Provision was made for the election, every year, of other necessary officers. The right of suffrage and to hold office was given to "every free male descendant of a white man," twenty-one years of age and upwards, inhabiting the territory at the time of its organization, and to others after a six months' residence. Among the enactments put in force on this occasion were laws for the organization of the militia, and the possession and improvement of lands, and certain laws of Iowa Territory, which were designated. The country was divided into four districts, instead of counties, called respectively Tualatin, Yamhill, Clackamas, Champoeg, and only comprised the section south of the Columbia river. It was decided "to designate these districts by the name of Oregon Territory." It was also determined that the expenses of the government should be paid by voluntary subscription instead of taxation, and in the form designed for this purpose it was provided "that in all cases each individual subscriber may at any time withdraw his name from said subscription, upon paying all arrearages and notifying the treasurer of the colony of such desire to withdraw." Taxation was resorted to, however, the ensuing year, when a tax of one-eighth of one per cent. was levied. Before the dissolution of this convention of the people, Alanson Beers, David Hill and Joseph Gale, all Americans, were elected by ballot to serve as Executive Committee. The first was a blacksmith attached to the Methodist mission, the second a farmer, the third had been a settler since 1834, and had commanded the first Oregon-built sea-going vessel, called the "Star," in a trip to *Yerba Buena*, now San Francisco, in 1841. They were good, honest, practical men, and respected by the community. The other officers elected at the previous meeting were authorized to qualify and enter upon their respective positions. The oath of office was then administered to the members of the Executive by the president of the convention, who was directed also to qualify the supreme judge. At the annual election on the 2d of May, 1844, new executive and

legislative committees were chosen ; the latter body held two sessions, revised the laws, and otherwise did considerable needed legislation, and submitted a series of amendments to the "Articles of Compact."

On the 26th of July, 1845, important additions perfecting the organic laws were ratified by a vote of the people. The boundaries of the territory had been extended so as to include all-north of the Columbia river to the parallel of 54° 40'. The executive power had been transferred to a governor, with the usual powers of such a functionary. The legislative authority was changed to a House of Representatives of not more than sixty-one members. In the Judicial Department, the right was given to create district and other inferior courts, as they were required, and the supreme court was re-arranged and made to consist of one judge, to hold two terms a year. The rights in reference to holding and improving lands, were more distinctly defined and made a part of the organic laws. George Abernethy was elected governor, and held that office by annual election thereafter for four years, until superseded, March 3, 1849, by General Joseph Lane, appointed governor by President Polk. Governor Abernethy, an intelligent Christian gentleman, unassuming, indisposed to court popular favor, with strong common sense, and a desire to do his duty conscientiously and quietly, was the right man for the occasion, and, whatever prejudice may assert to the contrary, it was fortunate for the colony that just such a person could be had to fill the highest and most responsible position in the pioneer government. It must be remembered that the population was of a mixed character, being composed of Americans, English, Canadians and half-breeds. This was the form of oath taken by the officials of the Territory: "I do solemnly swear that I will support the organic laws of the provisional government of Oregon, so far as said organic laws are consistent with my duties as a citizen of the United States, or a subject of Great Britain, and faithfully demean myself in office. So help me God." It was requisite to exercise great prudence in the management of affairs, that national prejudices might not be excited to the disruption of the cordial relations existing, and necessary to be maintained in the successful conduct of the government.

Civil authority in Oregon may be said to have assumed a per-

manent and dignified character from the assumption of the administration of affairs by Gov. Abernethy, and the judicious and efficient legislation which ensued on the part of the people's representatives. The general acceptance, if not the unanimous approval, of the provisional government, by the settlers of all classes, regardless of their attachments to the forms of home governments, made it strong and maintained its jurisdiction. Under it life and property were protected. Schools, institutions and churches flourished. The community was prosperous and happy. Contracts were maintained and the collection of debts enforced. Specie being scarce, wheat was made a legal tender in the payment of all demands. War was vigorously and successfully prosecuted. In the winter of 1847 and 1848, and the succeeding spring, three hundred and fifty men were kept in the field, east of the Cascade Mountains, in offensive operations against the Cayuse Indians. In thirteen days from the receipt of the information at the seat of government, Oregon City, of the massacre of the missionaries and immigrants at Wa-il-at-pu, a force of fifty armed men were in possession of the mission station at the Dalles of the Columbia river, the key of the position, having marched a distance of one hundred and fifty miles. It will be borne in mind that there were no steam facilities for travel and transportation in those days, and that this march was made in the inclement month of December. The legislature, then in session, authorized the governor to organize a force of five hundred mounted volunteers; only about two-thirds of this number, however, were actually enrolled. As fast as the companies could be equipped they moved to the front by the old pack trail up the Columbia. The two fights at the canyon of the Des Chutes, in which the enemy were driven each time with loss, occurred on the last two days of February. The battle of Umatilla, where the enemy were again repulsed with serious loss, was fought on the 2d of March. On the 4th the advance of the column occupied Wa-il-at-pu, Whitman's Mission, now Wallawalla, three hundred miles away from the seat of government and almost the same distance from any settlement of note. Commissioners accompanied the troops, authorized to treat with the various tribes to prevent their alliance with the Cayuses, in which they succeeded—the steady

advance of the volunteers, and the sharp and decisive fighting, proving effectual.

All this was a surprising display of energy and power, and would be regarded as remarkable in the operations of any government; but in one so new and inexperienced as that of the pioneers of Oregon, it must be proof eminently satisfactory as to the ability and efficiency of it; that it was not one only in name, but a government founded in the esteem and sustained by the will and majesty of the people. The highest compliment has been paid to the integrity and patriotism of those Americans who really created and administered this early organization, in the simple circumstance that the greater part of those of foreign birth who shared with them the fortunes of that government, as soon as an opportunity was afforded became citizens of the United States. It is indicative of the good faith and honest dealing which had characterized the association. The coming generations, who are to build up the State of Oregon to a scale competing with the grandeur and power of other states, will the more and more appreciate the work of their pioneers, as in the performance of that duty glimpses after glimpses of the grand future are disclosed. The highest regard will be cherished for them when they shall have passed away, to live again in the grateful stories of the thrilling incidents of frontier and wilderness life. Few deeds will be found within the period of that pioneer rule which any one will care to have disclaimed, or which will cause the least reproach. The Oregon pioneers were a class of men possessing the superior virtues which make a superior manhood. Already they have been distinguished by the highest honors—in the pulpit, on the bench, at the bar, as governors, as congressmen, as senators. They did their work unostentatiously, but did it well, in leaving a broad and substantial foundation, at least, for the more complete and perfect work of those who were to come after them.

Portland, Oregon, March 1, 1874.

GEO. L. CURRY.

MINIATURE PAINTING.

THE subject of Miniature Painting is one which cannot perhaps be treated satisfactorily within the limits of a short paper, and yet it is one of so much interest, and so instructive in the history and principles of the purest forms of art, that even a brief consideration will be a source of profit and pleasure. For miniature painting, more perhaps than most forms of art-work, strongly appeals to the finer feelings of our nature. It carries us back in imagination to the humble cells of the monks of mediæval times, where, day after day, year after year, and even lifetime after lifetime, the faithful artists pour out the whole earnestness and piety of their nature in the work of enriching the pages of the Missal and the Breviary; and it recalls, in later times, when the purposes of the art were changed, the triumph of the gifted artist, whose skill and patient labor is able to produce for others tiny pictures, on little bits of ivory, which will be enduring recollections not only of the features but of the characters also of those they love. Much pleasing romance, too, there is, gathered around the history of miniature painting, and much that would furnish perhaps more entertaining matter for a paper than this will promise; but our present purpose is rather to look for a moment into the history of this beautiful art, to note its effect upon the rise and progress of the art of painting, and to recall the names of a few of those who have been the most successful in such work in Europe and in our own country. And in these days of hurried work and labor-saving inventions, when a good photographer and an indifferent artist, or the latter alone, will, for a trifling sum and upon a week's notice, produce a portrait or a copy of the work of an old master sufficiently satisfactory to the average mind and taste, it is worth our while to pause, and justly admire the work of the *pre-photographic* days, when the best of artists were willing to expend their time and abilities generously upon such work, and our grandfathers and grandmothers were glad to pay them well for such valuable treasures of art.

In tracing the origin of miniature painting, we are carried back to the earliest periods in which art in any form was known. For we are told that the ancient Egyptians were in the habit of adorning

their papyri with miniature paintings of hieroglyphics ; and Pliny tells us that a similar art was practiced in the early days of Greece and Rome. And that it was still existing in the earlier period of the Christian era is evidenced by the fact that there are still preserved two specimens at least of manuscript illuminations probably of the 4th or 5th century: a fragment of a Virgil (which, although a fragment, contains 50 miniatures) in the Vatican, and a portion of a copy of Homer in the Ambrosian Library at Milan.

But it was in the middle ages, from the 8th to the end of the 14th century, that this art reached its perfect development ; for during that period, in nearly all the religious houses, the monks spent much time in its careful study, and in the patient labor of illuminating their manuscripts of the sacred volumes and copies of the works of the classical authors. They were called *illuminatori*, and from the fact that the initial letter of a chapter or a paragraph was painted in *red*, the pigment for which was the Latin *minium*, or red lead, they acquired the name of *miniatori*, from which our word *miniature* is formed. Curiously enough, therefore, this word, which always conveys now the idea of *smallness* or *minuteness*, and which we have adopted as an adjective also to express the same idea, comes directly from a word which did not in any way indicate the size of the picture, but only the color of the initial letter which, with its ornamentation, furnished the border or frame in which the picture was set.

It would be impossible to say too much in praise of the work of these "miniatori" of the Middle Ages. All over Europe—in Italy, France, Germany, the Low Countries, Spain, and England, this beautiful art was assiduously studied, and with wonderful results ; and those who have seen the superb examples preserved in the many collections of the manuscript illuminations of these old artists find it difficult to say in what country the finest were produced. And it is impossible to over-estimate, too, the value of this work in preserving and supplying valuable material for the development of the art of painting throughout the world. These little paintings, the results of earnest thought and patient, painstaking care in the cloister and the cell, furnished the "*studies*" for those great masterpieces, on panel, on wall, and on canvas, which mark a golden age in the Art of Painting.

With the invention of printing, miniature painting, in the form

it had thus far taken, practically disappeared, and in modern times it has been confined almost entirely to the production of portraits. In this direction, too, it has played an important part in the history of art, by teaching faithful accuracy of drawing and delicacy of expression, and serving at the same time, more than any other department of painting, to produce and preserve a succession of portraits, more or less faithful, of men and women noted in history.

In France we find a succession of eminent artists devoting themselves exclusively, almost, to this department of art. Among the more recent of these the most prominent are Augustin and Isabey. To Augustin especially, modern miniature painting is indebted perhaps more than to any one else; for not only did he apply himself faithfully for a period of more than forty years to the production of a series of "correctly drawn, highly finished, and finely colored portraits," as Gabet describes them, but established in Paris, and taught for many years, a school of painting, at which many of the best miniature painters of the present day were educated. Isabey was a pupil of David, and intended for a historical painter; but he abandoned that pursuit early in life, and devoted himself entirely to miniature painting. An art critic says of him: "He is the only artist who can compare with Augustin; if the latter possessed more strength and warmth of color, Isabey has greater delicacy and softness."

In England we find almost a continuous line of distinguished miniature painters, extending from the early part of the 16th century down to the present time. The famous Hans Holbein, who did so much for England in the way of portrait painting, was sent, the historian tells us, with a letter to Sir Thomas More. The good Lord Chancellor was so much pleased with him and with his work, that he persuaded him to establish himself at his house; and while there Holbein painted several pictures, with which the hall of the house was adorned. Sir Thomas wishing him to be presented to the King, adopted the simple but effective plan of inviting the King to his house to a banquet, and when there, His Majesty was so much pleased with what he saw, that he carried off both pictures and artist, and gave them quarters in the palace, where Holbein remained, in very comfortable circumstances apparently, for many years. Although Holbein painted

but little in miniature, yet that little was enough to draw out of his goldsmith's shop at Exeter Nicholas Hilliard, who, beginning with the study of Holbein's designs, soon became famous as a miniaturist, and was appointed court portrait painter to Queen Elizabeth. Then followed Isaac Oliver, a pupil of Hilliard, of whom it is said: "He has hardly been surpassed by any artist of any country," and he left as a worthy successor in his art, his son, Peter Oliver. He and his cotemporary, John Hoskins, were the famous miniature painters of Charles I.'s time. Hoskins' pupil, Samuel Cooper, was noted as the artist who painted the portraits of Oliver Cromwell and John Milton, and Spooner says of him: "He was the first artist of his country who gave a strength and freedom to miniature painting; his coloring was pure, his carnations were beautiful, and the hair was painted in a flowing, elegant manner." Then followed Flatman, Gibson, Cosway, and others, until we come, by an easy transition, to that part of our subject which is perhaps of more immediate interest to us now—the miniature painters of our own country. Foremost of these, without doubt, and equal perhaps to any of his cotemporaries in Europe, is Malbone, many of whose paintings we have among us. He was born in Newport, Rhode Island, in the latter part of the last century, and lived there at a time when that old city was a centre of great culture and refinement. Oddly enough, the first real exhibition of his talent was in painting a scene for the theatre in Newport when a boy, and the next exhibition we have of it is in his exquisitely painted miniature portraits. No more graceful criticism upon the value of his paintings can be given than in the words of his very dear friend, Washington Allston, a man whose pen was as graceful as his pencil. "He had the happy talent," he says, "among his other excellencies, of elevating the character, without impairing the likeness. This was remarkable in his *male* heads, and no woman ever lost beauty under his hand. To this he added a grace of execution all his own."

The intimate friend of Malbone in early life, Charles Fraser, of South Carolina, was much noted as a miniature painter. Almost every person of note in his native State, for a period of more than fifty years, was the subject of his portraiture. George Catlin, a Philadelphian, chiefly noted for his studies of the manners and customs of the Indian tribes of North America and his portraiture

of their chiefs, was a miniaturist of great merit; and Henry Inman, also, of New York, whose excellent portraits in oil are so well known and so much admired, sometimes painted miniature portraits, which are greatly prized. But the best known of the miniature painters of our own city are the Peales, father and son, the latter especially having been engaged in work of this kind during nearly half a century. He devoted very much time and careful study to the production of faithful portraits of Washington from life studies.

Within the past few years the camera of the photographer has dealt a blow to miniature painting somewhat similar to that which it received from the printing-press several hundred years ago. But so long as art is anything more than mere imitation, the occupation of the portrait painter will not be gone. He may call photography to his aid to gain accuracy of drawing and correctness of proportion, but there remains always to be done that which cannot be the work of a machine, but of the gifted artist only, to throw into the portrait the expression of character and of intelligent life.

A word, before concluding, as to the method of work in this art. Strictly speaking, miniature painting includes only water color painting on vellum or ivory. And yet there is an important distinction between the method of painting known as "*guache*," and the true aquarelle. The first of these is the method adopted in work upon vellum, such as the richly illuminated manuscripts of the Middle Ages, of which we have spoken. The colors are ground in water, and diluted with gum water mixed with white, so that, in such painting, there may be a colored back-ground; the lights are put on in successive layers, and the artist covers the whole surface of his picture. In Aquarelle, on the other hand, the white of the back-ground is reserved for the lights of the picture. For this, ivory has been found to be the best kind of material on which to work, possessing a transparency of texture, and producing a peculiar softness of effect in the painting, especially in the carnations. The back is always protected by something as perfectly white as possible, for anything dark would show through it. Usually the piece of ivory is quite small, such as can ordinarily be obtained; but when larger pieces are required, the elephant's tusk is sawed around its

circumference, and the ivory steamed and flattened by powerful pressure, and then mounted for use. In this way plates have been obtained as large as 18x20 inches.

We cannot, in conclusion, better state the true character and correct work of miniature painting than in the language of M. Blanc in his delightful book "La Grammaire des Arts du Dessin." If art were a simple imitation of the true, every representation in miniature would be proscribed, because it implies a contradiction between the distance the smallness of the image supposes, and the careful finish that destroys the idea of the distance. Happily art is something besides imitation of the real; it is a beautiful fiction which gives us the *mirage* of truth, upon condition that our soul shall be the accomplice of the falsehood. It is an error, then, to suppose that the miniature painter should treat his little figures as if they were sunk in the picture, separated from us by successive layers of atmosphere, and that he ought to make them seem afar off by reason of light and aërial color. Nothing would be more insipid than a vaporous execution that would allow what we hold in our hands to vanish from our eyes. Taste counsels happy trickeries which strongly interest us in the essential features, leaving the rest out of sight. Upon the ivory of the miniaturist, as well as the intaglio or cameo of the engraver, art ought to express much with little. Since the artist must insist upon that upon which expression depends, let him content himself by "putting in evidence" the great features and gliding over the rest; he will exclude all that is useless, but in compensation will strongly express what is decisive."

S. WAGNER, JR.

VIOUET-LE-DUC.

All travelers on the continent of Europe who appreciate mediæval architecture, must have been forcibly struck by the contrast between the restorations of Gothic churches in France and those in any other country. In Italy the loftiest idea of a restoration is a coat of whitewash on the interior, and all lovers of art know how many glorious church-frescoes have been injured by the process. Whenever it is possible to do so, the Italian restorer adds some peculiarly inappropriate Italian renaissance features to both

exterior and interior, as has been done in the Milan cathedral, notably in the western façade. In France, on the contrary, the restorations have been generally conducted with admirable taste and skill, and it is hardly too much to say that this is all due to the efforts of the greatest living architect, M. Viollet-le-Duc.

Eugène-Emanuel Viollet-le-Duc was born in Paris in 1814, and as he has always been both a hard and systematic worker, he probably has still many years of usefulness before him. He has devoted his whole life to the study of the ecclesiastical, civil and military architecture of the middle ages. From 1836 to 1837 he studied in Italy and Sicily the remains of Greek and Roman art, especially at Rome and at Taormina; but with these exceptions his studies have been almost confined to mediæval architecture, and especially to the noble examples afforded by his own country. He has given us sketches and studies of the principal monuments of Sens, Carcassonne, Toulouse, and many other French towns. In 1840 he was made inspector of the works of the Saint-Chapelle, with M. Lassus, and he has ever since been occupied with the restoration of ancient buildings in every part of France.

As the result of a competition in 1845 he was charged, in concert with Lassus, with the restoration of Notre Dame de Paris, and with the construction of a new sacristy. He completed this restoration in 1856, with the polychromatic decoration of the interior.

In 1846 he was chosen the architect of the Abbey of Saint-Denis, the restoration of which is, at this time, almost completed.

In 1849 he undertook the restoration of those wonderful mediæval fortifications at Carcassonne, and the same year he began the restoration of the noble Cathedral of Amiens. In 1853 he was made one of the three Inspectors General, charged with the administration "*des cultes du service diocésain en France*," and he conducted or directed among other restorations those of the church of Notre Dame de Châlons-sur-Marne, of the Cathedral of Laon (the interior of which is possibly the finest in the world), and of the Château of Pierrefonds. Mr. Charles Wethered has given an excellent description of the work at Pierrefonds, and a very interesting sketch of Viollet-le-Duc.¹

¹ See letters on the "Restoration of Historical Monuments in France." *Times* (London), August 25, 1874.

Mr. Wethered says: "The Château of Pierrefonds, built originally by Louis, Duke of Orleans, one of the most powerful nobles in Europe at the close of the fourteenth century, is a faithful reproduction of one of the finest mediæval structures in the world. It is a majestic feudal castle without and a magnificent palace within. I know nothing that conforms better to Ruskin's cardinal principle of breadth in well-building—breadth in everything—solid stone, broad sunshine, starless shade! The partial rebuilding of it has employed a thousand men for twelve years."

At the end of 1863 Viollet-le-Duc was made Professor of the History of Art and Æsthetics in the reorganized Ecole des Beaux-Arts, which position he occupied only for a year.

"Viollet-le-Duc's pen has been as prolific as his pencil. In his published works we find a masterly and comprehensive survey of various provinces of art not obtainable elsewhere. With a rare capacity for acquiring and assimilating a knowledge of the history of all nations and epochs, he has shown, along with other searchers in the same wide field of inquiry, that the most authentic evidence of the social and political condition of countries is that reflected in their arts, and above all in the 'magnificently human art of architecture.' In the case of France they form an unbroken chain of historical landmarks, whose links connect the ancient world with the modern—the abiding witnesses of the triumphs and tragedies of a great and gifted people, who have exercised a mightier and more continuous influence over the affairs of Europe than any other nation since the fall of the Roman Empire. Her ample series of documents in stone in themselves go far to ratify the recent assertion of an able Edinburgh reviewer, that 'the grandest of all national histories is that of France.'

"Individually, Viollet-le-Duc is an intellectual king among men, with personal attractions of dignity and grace befitting a descendant of the old *noblesse*. I have never seen a nobler head, or a countenance more expressive of mental power. He comprises the seriousness and solidity of the English character with the *verve* and *esprit* of the French temperament. Most of us, I suppose, accept to the full Carlyle's helpful doctrine of hero-worship—of loyal recognition of honored chiefs in every leading sphere of human thought and action; and here we have a notable living example of the hero as artist, as poet or seer, who speaks to us for

our instruction and delight, not only in the printed volume, but in the still more fascinating language of form and color. He approaches truth on its æsthetic side, and his doings are the record of its perception and embodiment in outward visible shape. The thousands who work under him, and catch some of his spirit, may well look up to such a man with sincere admiration and respect. One of his principal employés said to us with hearty enthusiasm, 'He knows everything—from astronomy and geography down to cookery—and it all comes like music from his lips.'

"In his numerous executed works, whether original or derivative, everything, as his friend Mr. Ruskin would say, 'is fitted to a place and subordinated to a purpose,' imparting to all he does that sense of satisfaction which we feel when contemplating the higher results of artistic unity and completeness. He is not less successful in the representation of ideal thought and sentiment than in the rendering of direct, specific fact. He never repeats himself, and nothing can stale his infinite variety—from the delicate aerial lines, woven as if by fairy work, of the aspiring *fleche* which so gracefully crowns the cathedral of Notre Dame, to the grand simplicity and aptness of every detail in his own house at Paris.

"In the course of our trip I learnt from my friend something of the daily routine of life and study by which this eminent man has been able to accomplish so much fine and enduring work, which perhaps may not be unprofitably recounted in an age of luxury and ease as a pattern for the guidance and well-doing of others. He enters his studio at seven in the morning, where he is engaged till nine in getting in readiness the work that will be called for, and preparing for his visitors, whom he receives from nine till ten, during which he takes his frugal breakfast standing. At this hour will be found awaiting the manuscript for the publisher, a pile of wood blocks for the engraver—who has only to follow the cut between the sharp lines of the finished drawings which cover them—plans for the builder, designs for the sculptor and blacksmith, and cartoons for the decorator or glass-painter—every one of which is the product of his own hand. For each of his staff as he arrives, after his '*Voilà Monsieur votre affaire,*' and verbal instructions, he has a kind word of friendly enquiry, encouragement or advice. At ten his studio is closed,

and he works at his drawings without interruption until his dinner hour at six. At seven he retires to his library, where he is engaged with his literary pursuits till midnight. This, his daily life at home, is but little varied when away. He generally travels by night, often taking journeys of several hundred miles; for he visits every building upon which he is engaged once a month, making any special drawing required upon the spot. He gives his instructions personally to the workmen, each of whom he notices in making his round of inspection. Though he has himself a perfect acquaintance with the technicalities of every craft, he does not disdain to consult their opinion, and he can, so we are assured by the men themselves, always teach something worth knowing belonging to the practical department of each. He will take the hammer and pincers of the plumber and show him how to beat or twist his lead to the required form, or the chisel from the sculptor, and with a few strokes gain for him the desired expression. He gives a perspective detail of every drawing, however small, and his designs for sculpture and goldsmith's work are drawn with photographic accuracy. His most accomplished sculptors say that it is impossible for them to render all the *finesse* of his delineations. And these beautiful sketches come from his hands by thousands; those forming the exquisite illustrations which adorn the published works would of themselves bear testimony to a life of rare industry and skill. But the most surprising thing of all is that he works entirely alone, unaided by clerks or assistants of any kind. As a proof of his remarkable powers, there is an instance, the truth of which I can vouch for.

“By the cession of Nice and Savoy, France got possession of a considerable portion of the Alpine region. No maps, other than the vaguest and most inaccurate, existed of this new territory.

“At the request of the French Government, Viollet-le-Duc undertook to survey and map it. For this purpose he spent the months of July and August of 1873 among the mountains, and there, unaccompanied and unaided, during that short space of time, by means of his observations, sketches, and wonderful memory, he made himself so perfectly acquainted with the topography of the whole district that, to use his own words, he knew the ground as well as if he had made it. Within another two months, after his return home, he had drawn to a large scale

three accurate and beautiful maps of the French Alps—a *carte à vue d'oiseau*, which shows the mountains, the snow, the glaciers, the rocks and the very moraines, as they would appear to the eye from a balloon; a *carte géologique*, which exhibits the formation of the hills, even to the very crystallization of the rocks; and a *carte routière*, on which is faithfully delineated every track, stream, crevasse, chalet, or other object which can guide the tourist, who, with this map in his hand, may find his way alone throughout the mountains. These maps, which have won the warm praise of members of the French Academy and other *savants*, will occupy two of the most expert engravers of Paris at least a score of months to execute in a form for publication worthy of the originals. This is not all. During the evenings of those two months passed in the mountains, he wrote and illustrated one of the most instructive of his smaller books, an English translation of which, I am happy to hear, is about to appear, entitled, 'How to Build a House.'²

"He is regarded as a high authority on the subject of modern, as well as of feudal, military engineering; and a treatise of his, now in press, *L'Histoire d'une Forteresse*, which describes how a fort should be built, will doubtless contain much theoretical and practical information on that important branch of the science of war. During the siege of Paris no officer of the engineers was more actively engaged or more skillfully contributed to the defence of the city.

"In his construction generally, Viollet-le-Duc employs and combines the various modern materials with a scientific knowledge and artistic feeling unapproached by any one engineer or architect of our own day. He is becoming in France the veritable founder of a new school of architecture. Though based on careful study and analysis of the ancient schools, it is not a mere revival or copy of what has been before, but a faithful expression of our present requirements and means.

"He brings into harmonious conjunction those vital elements and immutable principles of art which belonged alike to the Greek of the time of Pericles and to the masters of the Middle Ages. The

²Republished by Messrs. James R. Osgood & Co., under the title of "The Story of a House." Translated by George M. Towle. Illustrated by the Author. Pp. 284. Large octavo, \$5. A cheaper edition is in press.

more they are studied, the more I am convinced it will be seen and felt that the achievements of this celebrated Frenchman in the associated arts of Architecture, Sculpture, and Painting, are not less remarkable for their catholicity of range than for the beauty of their design and mastery of execution.

"Having myself derived mental health, pleasure, and profit from devoting a country doctor's short holiday to their inspection, my object in making these notes will be fully served if they should in any way be the means of prompting others to more thoroughly investigate works whose fame will be for ever identified with the historic buildings it has been their restorer's happy fortune to hand over to posterity in a state of renovated completeness, not unworthy of their original nobleness and grace."

In the course of his numerous works, M. Viollet-le-Duc has completed his first researches in the art of the Middle Ages, and has gathered together an immense amount of materials, and these he has grouped in a number of works, the most important of which is the "*Dictionnaire raisonné de l'architecture française de XI^e au XVI^e siècle* (1853-1868)," without doubt the most complete and the best work on architecture ever published.³ He has also published a *Dictionnaire du mobilier français. de l'époque carlovingienne à la Renaissance* (1855), and an *Essai sur l'architecture militaire au moyen âge* (1854), but both of these works are only developments of his great Dictionary. In 1860 he contributed to the *Moniteur* a series of "Letters on Sicily," afterwards published in book form, and from 1858 to 1868 he brought out a series of "*Entretiens sur l'architecture.*" (In 14 parts, 8vo.)⁴

In 1862 he published in conjunction with MM. Ferdinand Denis and Charnay, a splendid work: *Cités et ruines Américaines*. (8vo. with atlas and photographs.) Finally he undertook in 1866, with M. Ouradon, a work entitled: *Chapelles de Notre Dame de Paris* (1867-1868: 20 parts in folio, with plates).

³A. Morel & Cie. Paris. 9 vols., 8vo.

Messrs. Jas. R. Osgood & Co. have now in press a translation of this magnificent work, which will be enjoyed not only by the professional, but by the general reader as well.

⁴Messrs. Osgood have now in press a translation of this work, under the title of "Discourses on Architecture." It has been translated by that very competent architect, Mr. Henry Van Brunt, of Boston.

As an artist or writer, he shows an especial and exclusive sympathy for the Middle Ages. As artist, he obtained the 3d medal in 1834, the 2d in 1838, and the 1st in 1855.⁵

THE PARTHENON.

Leaden and murky the dark morn dawns on the City of Pallas,
 Saddened with mist-like rain drizzling in tiniest drops.
 Over Penticlan sculptures it fashions a glimmering network,
 Spreading its web upon frieze, column and shattered relief.
 Slowly the ochreous time-stained hues of the shaft, with the white
 rents

Riven by Latin and Turk, lapse into shadowy gray.
 Fitfully comes from the sea and the dim blue islands the storm-
 wind,

Chasing in squadrons the leaves stripped from the quivering
 trees.

Moslem, Apostate and Frank who achieved this work of des-
 truction,

Each in his turn I arraign, holding them Vandals alike.
 Othman and Latin, alike I accuse you: for here I am Pagan,
 Worshipping Beauty and Art e'en in their ruin and death;
 Ye who chased from her temple the blue-eyed Pallas Athené,
 Goddess of wisdom and art, virtue and lofty emprise,
 Ye who traced on her walls yon limnings of saint and confessor—
 Ghost-like outlines now, fading, disfigured and vague:
 Ye who crooned in her fane your "*Chaire anympheute Nymphe,
 Aspile Parthene.*" Nay, why did you alter her name,
 Worshipping ever a Virgin? Ye of the crescent and sabre,
 Ye who a minaret reared, blind to the marvels of art,
 Ye whose whitening skulls intermingled with shivers of triglyphs,
 Friezes and statues you crushed, grin in disconsolate heaps:

⁵ His brother Alexandre (born in Paris in 1817), is known as a landscape painter, and has frequently exhibited in the *Salons* since 1837. See the *Dictionnaire universel des contemporains*, par G. Vapereau. Paris. Hachette et Cie. 1870.

Minions of Venice, who sacked and destroyed while feigning to rescue ;

Treacherous Briton, who stole trophies for gazers to scan,
Why did you spare us the beauty divine of the sea and the mountains,

Beauty unchanging and pure, gracing the scene as of old?
Pausing for answer, I hear but the woe-fraught voice of the raven,
Poised on the blast, and the owl housed in the clefts of the wall.
Down in the City a white-beard prelate in satin and tinsel,
Under a vault-like dome decked with portrayals of saints,
Drones his monotonous cantique, his "*Chaire anympheute Nymphe.*"

Choristers shriek in response "*Aspile Parthene.*" Which ?

J. G. BRINCKLÉ.

THE VOYAGES OF THE ZENOS.

AMONG the documents which support the various rival pretensions to priority in the discovery of America, is a short account of certain voyages made in the North Atlantic, about the close of the fourteenth century, by two Venetian brothers, Nicolò and Antonio Zeno, in the course of which, it is claimed, they at different times visited Greenland, and one of them, Antonio, received information concerning certain large countries lying to the southward, and actually reached the coast of an island, thought by some to have been Newfoundland. The account of these voyages was first published by Marcolini, a noted bookseller of Venice, in 1558—more than a century and a half after they are said to have taken place—and is believed to have been written by a second Nicolò Zeno, a descendant of one of the brothers, who professes to have compiled the story from original letters written, one by Nicolò to Antonio, and others by Antonio to a third brother, Carlo, a very distinguished man in Venetian affairs. The writer tells us that these letters fell into his hands when he was a mere child, and, the value of their contents being unknown, were unfortunately in part destroyed. When, upon recognizing their importance at a later period, he undertook to compose from them

a connected narrative, he found in them allusions to a map illustrative of the voyages, and upon instituting a search, was fortunate in discovering it in the palace of the Zenos, although in a very dilapidated condition. Of this map he prepared a copy which he published with the narrative.

A story constructed out of such fragmentary materials, to assume the facts to have been as here stated, must necessarily be incomplete, and could hardly fail to abound in errors, due either to the writer's mistaken interpretation of obscure statements in his original manuscripts or to his misguided attempts to supply from other sources their numerous *lacune*. In fact there are particular passages in the Zeno narrative which no amount of explanation can free from the imputation of being sheer fable, and there are likewise geographical blunders, particularly in the map, such as it seems impossible to believe could have been made by any one who had ever sailed the Northern seas; yet as an offset to these inaccuracies, we meet with correct details respecting places and customs which have unquestionably proceeded from an eye-witness, and which have generally been thought to display information regarding these regions inaccessible in the south of Europe even in the middle of the sixteenth century. This mixed character of the narrative long rendered it an enigma to geographers and antiquaries, and probably there is no other similar document of equal length and importance whose claims to credence have been so often and so earnestly discussed.

About the beginning of the present century, to go no farther back, the credibility of the Zeno story was a standing subject for discussion in the antiquarian world, and one upon which opinions were nearly equally divided. Among those who accepted the story may be named John Reinhold Forster, the distinguished companion of Captain Cook, who published it, accompanied by a dissertation, in his "History of the Voyages and Discoveries in the North;" Eggers, who advocated it in his prize essay on "The Site of the Old East Greenland;" and Cardinal Zurla, who wrote a lengthy volume in its support. It was accepted by the celebrated geographer, Malte Brun; and the illustrious A. Von Humboldt was likewise inclined to view it favorably, admitting the difficulties which surround the story, but observing, as an argument in its favor of no little weight, that "it is straightforward,

and contains detailed descriptions of objects of which nothing in Europe could have given the idea." (On y trouve de la candeur et des descriptions détaillées d'objets, dont rien en l'Europe ne pouvoit leur avoir donné l'idée. *Examen Critique*, tom. II., p. 122.) Still those who doubted or denied the truth of the story, were numerous, although the arguments used against it were not of such conclusiveness as to compel conviction.

In the year 1833, however, an assault was made upon the authenticity of the Zeno document, so ably conducted, and supported by such learning, that this long open question seemed at length to be decided, and that, too, without a prospect of appeal. In this year Captain Zahrtmann, of the Danish navy, published in the Transactions of the Royal Antiquarian Society of Copenhagen, a paper, subsequently communicated to the London Geographical Society, in which he submitted the narrative of these voyages to a searching cross-examination, and undertook to prove, both from internal and extraneous evidence, that it involved inconsistencies and misstatements wholly irreconcilable with the theory of its truth. The conclusion at which Zahrtmann arrived as the result of his investigation was that "both the history and the chart were most probably compiled by Nicolò Zeno, a descendant of the Zeni, who, for brevity's sake, may be called Nicolò Zeno, junior, from accounts which came into Italy in the middle of the sixteenth century, being the epoch when information respecting Greenland first reached that country, and when interest was awakened for the colony which had disappeared." The evidence by which this conclusion was supported cannot be given in this place, but some idea of its weight may be gathered from the words of a writer in the *North American Review* for July, 1838, who in a notice of Zahrtmann's paper, says: "We must say that our first impressions after perusing that masterly production, were so strong against even the possible truth of the account, that we well-nigh resolved to abandon the matter as beyond all hope of surgery, without bestowing another thought upon it. The writer brings such a mass of *primâ facie* proof to bear upon the subject, and discovers so many loose points and apparent inconsistencies in the story, that the argument comes upon one with the force of demonstration. At the same time, the perfect freedom of the paper from vituperative remark, and the admirable coolness as well as

skill with which the operator dissects his victim, are far from diminishing the effect produced upon the mind." This reviewer was, however, far from relishing the total annihilation of the Zeno story, and adds that a more careful examination of this elaborate essay had suggested some ideas "that detract, to some extent, from the conclusive character of the argument, and leave a ray of hope to the sanguine admirers of Venetian prowess." Still the prevailing opinion among scholars seems to have been that as a whole the argument was unanswerable, and, notwithstanding that Bredsdorf some years later attempted to revive the story, the adverse verdict of Zahrtmann has generally been accepted.

Recently, however, a new advocate of the authenticity of the Zeno story has appeared in Mr. R. H. Major, Secretary of the Royal Geographical Society of London, who has published in the last volume of that society's journal (1873) a paper in which he has reopened the whole question, taking in particular a new view of the chart of the Zenos, which presents the chief difficulties, and following and attacking point by point the argument of Zahrtmann, as the most formidable assailant of the pretensions of the Zenos that has yet appeared. In the opening portion of his paper Mr. Major says that the result of his investigation has been "to prove Admiral Zahrtmann, either in his facts or his deductions, wrong on every point, and to convict him of throwing upon an honorable man, occupying no less distinguished a position than that of one of the Council of Ten of the Republic of Venice, a series of aspersions of the most ungenerous character." This assertion seems unfortunate, since it prepares a disappointment for the reader. In fact none of the strong positions of Zahrtmann have been actually carried, although they have been greatly weakened by facts and suggestions offered by Mr. Major. Yet in dealing with the chart he has met with more success, having removed numerous stumbling blocks, and the impression left by a careful perusal of his whole argument is that the cause of the Zenos is by no means a lost one, but that they may yet be reinstated in their disputed honors.

In order to place in a clear light some of the more important points in the question which has thus been reopened for discussion, it will be necessary to give an abstract of the story of the voyages. In the year 1380, according to the narrative, although

the precise date is one of the points in dispute, Nicolò Zeno, a member of a distinguished Venetian family, being desirous of learning the customs of foreign lands that he might the better serve his own country, fitted out a ship at his own expense and sailed out of the Straits of Gibraltar, with the design of visiting England and Flanders. He encountered a violent storm, and, after having for several days been driven at the mercy of the wind, was wrecked on what he describes as the island of *Frisland*. Zeno and his companions escaped with their lives, but were attacked by the natives of the island and would have fared hardly but for the timely interference of a powerful chieftain, named *Zichmni*, the ruler of a neighboring principality, who happened to be in the vicinity, and into whose service the Venetian nobleman entered in the capacity of pilot of his fleet. After remaining with this chieftain a year or so, Nicolò Zeno wrote home to his brother Antonio to join him, which he did. Nicolò survived his brother's arrival four years and died in *Frisland*; after which Antonio remained ten years longer in the service of *Zichmni* and then returned to Venice, where he died probably about the year 1405 or 1406.

In the year preceeding Nicolò Zeno's shipwreck on the coast of *Frisland*, *Zichmni*, who is styled "Lord of Porlanda and Duke of Sorano," had defeated the King of Norway, to whose realm *Frisland* belonged, and was now engaged in completing his conquest of the island. In this operation, which terminated successfully, he received valuable support from his newly made pilot, to whose skill in nautical affairs he was on one occasion indebted for the extraction of his entire fleet from a position of imminent peril. After the arrival of Antonio, the two brothers accompanied *Zichmni* in a second expedition directed against *Estland*, which lay between *Frisland* and Norway. Here they succeeded in doing much damage, but hearing that the King of Norway was coming with his whole fleet to oppose them they departed, and being overtaken by a violent gale, lost some of their vessels. With the remainder they made harbor in the island of *Grisland*, which lay to the south. News came that the enemy's fleet had been entirely destroyed by the said gale, and *Zichmni*, "seeing that *Islanda* lay not far off to the northward," sailed thither to attack it, but finding the place resolutely defended, turned aside to other islands

near by, seven in number, viz: *Talas, Broas, Iscant, Trans, Mimant, Dambere* and *Bres*. He took them all and built a fort in *Bres*, where he left Nicolò Zeno, and he himself returned to Frisland.

The occurrences here mentioned occupy but a small portion of the narrative, which dwells more fully upon two voyages of discovery subsequently made, one by Nicolo, and a second by Zichmni himself, accompanied by Antonio; but since it is upon this part of the narrative that the discussion has mainly fallen, we shall present in this place, without designing to examine fully, some of the difficulties which have been raised by Zahrtmann and others, as well as indicate the manner in which they are met by Mr. Major. Upon the accuracy with which these statements can be made to fit the geography and the contemporary history of the North, will depend, in some measure, the amount of credence to be given to the remainder of the story.

The first question concerns the identity of the island of Frisland, which upon the map is represented as a large island lying some four degrees to the south of Iceland, and about equal to that island in extent. Since no such land now exists, it was the opinion of Cardinal Zurla among others, that the Frisland of Zeno had met the fate of Plato's Atlantis, and had been submerged beneath the sea. Zahrtmann, however, adopts the opinion of Buache, Eggers, and Malte Brun, that by Frisland was really meant the Færøe islands, and so far Mr. Major agrees with him entirely. This identity is proved satisfactorily, notwithstanding the incorrect delineation of the island on the Zeno chart, by the close resemblance of some of the names attached to places in Frisland to names occurring in the Færøe groups. Rock "Monaco," at the southern point corresponds in position with Rock Munk south of the Færøe islands, and the names "Sudero Colfo," "Streme," and "Andefard," must be considered to represent Sudero Sound, Strömöe, and Andefer. The name Frisland itself may, besides, be very plausibly explained as a corruption of Færöisland, although it is not quite clear that this name was ever in use in the North, the old name for these islands being, as Zahrtmann tells us, Fær-eyar. Estland, the place next mentioned, and said to lie between Frisland and Norway, was unquestionably the modern Shetland. Of this place Zahrtmann remarks:

“Though Shetland is called Estland, yet, in the first place, this is only a trifling transposition of the name in the spirit of the Italian language, and not exhibiting any greater deviation than is found in the other appellations given at different times to these islands, such as Hialtland, Yealtaland, Yetland, Zetland, and Hetland; and besides, we recognise so many names here, that we are almost tempted to believe that this was precisely the part of the chart best known to the author.”

Nicolò Zeno, then, was wrecked upon one of the Færøe islands, and the military expedition led by Zichmni, was directed against the Shetland group. But who was this Zichmni, this prince with the lofty title of “Lord of Porland and Duke of Sorano”? Here is one of the most knotty points in the whole account, yet we must pass over it rapidly, merely giving in outline the facts upon which the decision of the question turns. The suggestion was first made by Forster that the Zichmni of Zeno was was one Henry Sinclair,¹ who, as is learned from the “Orcades” of Torfæus, was in the year 1379 invested by Hakon, king of Norway, with the Earldom of the Orkneys, Caithness, and the Shetland Islands. The succession to the earldom was contested, and Sinclair appears to have met with opposition in entering upon his possessions. To this extent the facts seem to support the Zeno story of the expedition to the Shetlands, but the difficulty arises that this is represented to have been an act of hostility against the king of Norway; whereas, a fact which Zahrtmann has insisted upon, and has supported by proofs, Sinclair at this time acknowledged fealty to the Norse crown, and ten years later, as a Norwegian Councilor of State, signed the act by which Eric of Pomerania was acknowledged true heir to the realm, which shows that up to this time his allegiance had remained unbroken. These facts cannot be set aside, and Mr. Major has but one way open for disposing of them, and that is to suppose that the Zenos, being at the time only imperfectly informed as to the true state of affairs, wrongly construed an attack upon a place which they understood to belong to the kingdom of Norway to be an act of hostility against the crown. Although this expla-

¹ Sinclair is the family name of the Earls of Caithness, the present Earl being the fourteenth. The third in descent from the Henry Sinclair here spoken of became the Earl of Caithness, the title previously having been the Earldom of Roselyn.

nation does not dispose in a quite satisfactory manner of the story about the loss of the King of Norway's fleet, it is perhaps admissible, if we make due allowance for exaggeration, provided the general accuracy of the narrative as a whole can be otherwise established. We pass therefore to consider briefly what seems to be the strongest evidence brought forward by Mr. Major in its favor.

Upon referring to the above given abstract of the account of this expedition it will be seen that Zichmni, on withdrawing from the Shetlands, took refuge in the island of Grisland, which lay to the *south*, and subsequently took a northerly course to reach *Islanda*, which he attacked without success. In this part of the narrative Mr. Major believes he has detected a confusion of names in which originated several of the blunders of the chart, and which, when clearly perceived, really affords the strongest possible proof of the authenticity of the original documents. It will be remembered that the original of the map was discovered in a dilapidated condition. How much of the copy was "restored" by the younger Nicolò there are no means of determining, but from an expression used by him, that he believed he had "succeeded with it tolerably well," it is clear that some portions of it must be credited to him. The *Islanda* of this passage has heretofore been taken to be Iceland, and this was undoubtedly the view taken of it by the restorer of the chart. Accordingly we find Grisland represented as a small island off the southern coast of Iceland, but to the *northwest* of Estland, notwithstanding that the narrative expressly states that it was *south* from this place. In pursuance of the same view regarding *Islanda*, the "restorer" of the chart, to adopt Mr. Major's theory, grouped the seven small islands, said to be near by, around the northeastern extremity of Iceland, where, as any good geographer even of the sixteenth century must have known there are no islands to be found. Now, although these islands do not belong to Iceland, they do belong to the Shetland group, "Talas" being Yelli; "Broas," Barras; "Ischant," Unst; "Trans," St. Roman's; "Mimant," Mainland; "Dambere," Hamna; and "Bres," Bressay. Mr. Major therefore concludes, and he supports his conclusion by other evidence, that the *Islanda* (or *Islande*, in the plural,) of the narrative is only a variation of the name Estlanda or Eslanda, and that what has heretofore been supposed to be an attempt of Zichmni upon Iceland, was simply a

renewal of his operations against the Shetland group. Grisland now falls into its proper position south of the Shetlands, being, in fact, Gross-ey, the largest of the Orkneys, the name having undergone a transformation similar to that which produced Frisland from Fær-eyar.

Space will not permit us to follow Mr. Major in the pursuit of other similar errors on the chart, which he attributes to the ignorance of the copyist; nor in his minute analysis of the narrative itself, which he shows *per contra* to accord wonderfully well with modern geography. It must suffice to say that his success in this investigation seems to warrant his concluding remark that, "In this fact we have proof that Nicolò Zeno, junior, the restorer of the map, is the cause of all the perplexity. But while this is a proof of his ignorance of the geography, it is the greatest proof that could be desired that he could not possibly have been the ingenious concocter of a narrative, the demonstrable truth of which, when checked by modern geography, he could thus ignorantly distort upon the face of a map."

Before resuming the narrative it may be well to notice in this place another strong point in the argument of Zahrtmann, and the answer made to it by Mr. Major. It was first pointed out by Cardinal Zurla that the date 1380 given to the voyage of Nicolò Zeno to Frisland cannot be correct, since mention of this cavalier occurs in the Venetian Annals as late as the 14th of December, 1388, when he was elected one of three syndics to take possession of the city of Treviso. This of course amounts to proving an *alibi* against the hero, who at this time should have been dead and buried in Frisland, and unless this discrepancy between the Annals and the narrative can be explained—and it must be borne in mind that the compiler of the narrative professes to have had before him letters which may be presumed to have borne dates—the gravest suspicion is cast upon the truthfulness of the latter. The answer filed against this objection shall be given in Mr. Major's own words: "The date of 1380, it is true, stands in Roman numerals on the Zeno map, and is written out in full in the narrative. But facts are stubborn things, and if we conscientiously and industriously resort to them instead of to preconceived conclusions, we shall generally arrive pretty near the truth at last. Admiral Zahrtmann elsewhere shows his perfect knowledge of a remarka-

ble fact, which, if he had been as anxious to find where Zeno was right, as where he might be made out to be wrong, would have rectified the above error of 1380, and neutralized all the arguments that he founds upon it. A relative of the family, named Marco Barbaro, wrote, in 1536, a copious work, entitled 'Discendenza Patrizie,' on Venetian noble families, and in the genealogical table of the Zeno family makes the following entry under the name of Antonio Zeno: 'He wrote, with his brother Nicolò the Cavalier, the voyages of the islands under the Arctic Pole, and of those discoveries of 1390, and that by order of Zicno, King of Frisland, he went to the continent of Estotiland in North America. He dwelt fourteen years in Frisland, four with his brother Nicolò and ten alone.' Cardinal Zurla first mentioned this fact and I have verified it, by procuring an extract of the entry from Venice through the kindness of my distinguished friend Mr. Rawdon Brown. . . . There is little doubt that Barbaro derived this statement from Nicolò Zeno, who had so nearly, but not quite, destroyed, when a boy, the old papers on which it was based. But in drawing up the said statement Nicolò Zeno showed that he was cognisant in 1536, two and twenty years before the Zeno narrative and maps were printed, of that true date of 1390, which coincides exactly with the evidence of the annals of his country. If both the dates 1380 and 1390 emanated from him, one was clearly a mistake, and as we can have no doubt which was the erroneous one, we have in the error itself, whether made through carelessness in either or both cases by Nicolò, or by the printer, or by the engraver, a proof that Nicolò was not at least the subtle and ingenious concocter of falsehoods that Admiral Zahrtmann would represent him to be." It may be added that a passage cited elsewhere by Mr. Major from the "Orcades" of Torfæus, seems to harmonize very well with this corrected date of 1390, and may possibly have reference to the same military operation against Shetland which in the Zeno narrative is exaggerated into a contest with the whole power of Norway. The passage is this: "In the year 1391 the Earl of Orkney slew Malise Sperre in Shetland, with seven others. A certain youth, however, with six others, procured a vessel at Scalloway and escaped to Norway." Torfæus does not give the occasion of this broil, but as Malise Sperre, a cousin of Sinclair, is known to have been a rival claimant of the

earldom, it is fair to assume that the trouble was over the disputed possession of Shetland. The contest may have been one of some magnitude, and as the friends of Malise Sperre, apparently, were Norsemen, there were some grounds for a misapprehension of the situation by the allies of Sinclair.

Having seen this portion of the Zeno document placed upon a respectable footing, the reader may be presumed to feel some interest in the succeeding portion of the narrative. We left Nicolò Zeno in a fort on the island of Bres, or Bressay, one of the Shetland group. In the following summer he resolved to try his fortune in a voyage of discovery, and, having fitted out three small vessels, he sailed northward in the month of July, and arrived in Engroneland, or Greenland. Here he found a monastery of Dominicans and a church of St. Thomas, close by a hill, "which vomited fire like Vesuvius and Etna." A curious account is given of this singular community of Friars, and of the way in which they managed to sustain life in this cold and desolate region. The monastery and church were heated by the water of a hot spring, and by means of this same spring the monks cooked their meat and baked their bread. By a judicious use of this hot water they also raised in their small covered gardens the flowers and fruits of temperate climates, and thereby gained much respect from their neighbors, who brought them presents of meat, chickens, etc. The hot water falling into the sea kept it free of ice to a long distance, and to this open space fowl and fish were attracted in great abundance. Their houses were built around the base of the hill, and were circular in form, with an opening at the top to admit light and air, while the warmth of the ground below supplied all necessary heat. In the summer they were visited by ships from the neighboring islands and from Trondheim, which brought them corn, cloths, and other necessaries in exchange for fish and skins. Some of the monks were from Norway, Sweden, and elsewhere, but most of them from Shetland. The fishermen's boats were like a weaver's shuttle; they were made of the skins of fish, and sewn together with fish bones in such a manner that, in bad weather, the fisherman could fasten himself up in his boat and expose himself to the wind and sea without fear, for they could stand a good many bumps without injury. The friars were liberal to workmen and to those who

brought them fruit and seeds, so that many resorted to them. Most of them, especially the principals and superiors, spoke the Latin language. This is in substance the account brought from Engroneland by Nicolò Zeno, who, shortly after his return to Frisland, died from the effects of exposure in this rigorous climate.

After the death of Nicolo, Zichmni would not allow Antonio to return to Venice, but being determined to make himself lord of the sea, wished to send him out to the westward, to verify the report of some fishermen who had discovered some rich and populous countries in that direction. The story of these fishermen, which was embodied in a letter from Antonio to his brother Carlo, is in brief as follows:¹

“Six and twenty years ago, four fishing boats put out to sea, and encountering a heavy storm were driven over the sea in utter helplessness for many days, and at length came to an island called Estotilanda, lying 1,000 miles west of Frislanda. One of the boats was wrecked, and its crew of six men were brought by the natives into a large and populous city, and taken before the chief, who sent for many interpreters to speak with them. Only one of these, who spoke Latin and had also been cast by chance upon the island, could understand them. On learning who they were and where they came from, the chief desired that they should stay in the country, which they did perforce for five years, and learned the language. One of them in particular, having seen much of the island, reported that it was rather smaller than Iceland, but much more fertile, having in the middle a high mountain, whence flow four rivers which water the whole country. The inhabitants are very intelligent, and possess many arts. In the king's library were found several Latin books, which were not at that time understood. The people had their own language and letters, and in the south there was a great and populous country very rich in gold. Their foreign intercourse was with Engroneland, whence they imported furs, brimstone and pitch. They sowed corn and made beer, which is ‘a kind of drink that north people take as we do wine.’ They had woods of immense extent, and many towns and villages. They built small boats and sailed them, but knew

¹ The fishermen's story is here given in the words of Mr. Major.

nothing of the compass. Hence these fishermen were held in high estimation, and were sent southward with twelve boats to a country called Drogio. They arrived there after a perilous voyage, but the inhabitants being cannibals, most of the crew were eaten. The fisherman and his companions were spared because they could catch fish with nets; and they were so much prized on this account that a neighboring chief made war on their master to get possession of them, and, being the stronger, succeeded. In this way they spent thirteen years, being fought for and won by more than twenty-five chiefs in that time; and in the course of his wanderings the fisherman gained much information. He describes the country as very large, and, as it were, a new world, the people very rude and uncultivated. They go naked and suffer from the cold, but have not the sense to clothe themselves with skins. They live by hunting, but as they have no metal they use lances of wood, sharpened at the point and bound with strings of hide. They fight fiercely, and afterwards eat the conquered. They have chiefs and laws, which differ in the several tribes. They grow more civilized towards the southwest, where the climate is milder, and they have cities and temples to their idols, in which they sacrifice men and afterwards eat them. In those parts they have knowledge of gold and silver.

“At last the fisherman determined, if possible, to return to his country, and finally succeeded. He worked his way to Drogio, where he stayed three years, when some boats from Estotiland came to the coast and received him on board as interpreter. Finally he returned to Frisland, and gave an account of this important country to Sinclair.

At length the expedition is organized for the verification of the fisherman's statements, and as the story of its adventures is that part of the narrative which has caused the greatest perplexity, it is here given in full:

“Our great preparations for the voyage to Estotiland were begun in an unlucky hour, for three days before our departure the fisherman died who was to have been our guide; nevertheless Zichmni would not give up the enterprise, but, in lieu of the fisherman, took some sailors that had come out with him from the island. Steering westwards, we discovered some islands subject to Frislanda, and passing certain shoals came to Ledovo, where

we stayed seven days to refresh ourselves and to furnish the fleet with necessaries. Departing thence, we arrived on the 1st of July at the Island of Ilofe; and as the wind was full in our favor we pushed on; but not long after, when we were on the open sea, there arose so great a storm that for eight days we were continuously kept in toil, and driven we know not where, and a considerable number of the boats were lost. At length, when the storm abated, we gathered together the scattered boats, and sailing with a prosperous wind we discovered land on the west. Steering straight for it, we reached a quiet and safe harbor, in which we saw an infinite number of armed people, who came running furiously down to the water side prepared to defend the island. Zichmni now caused his men to make signs of peace to them, and they sent ten men to us who could speak ten languages, but we could understand none of them, except one that was from Shetland. He being brought before our prince, and asked what was the name of the island, and what people inhabited it, and who was the governor, answered that the island was called Icaria, and that all the kings that reigned there were called Icari, after the first king, who, as they said, was the son of Dædalus, king of Scotland, who conquered that island, left his son there for king, and gave them those laws that they retain to the present time; that after this, when he was going to sail further he was drowned in a great tempest; and in memory of his death that sea was called to this day the Icarian Sea, and the kings of the island were called Icari; that they were contented with the state which God had given them, and would neither alter their laws nor admit any stranger. They therefore requested our prince not to attempt to interfere with their laws, which they had received from that king of worthy memory, and observed up to the present time; that the attempt would lead to his own destruction, for they were all prepared to die rather than relax in any way the use of those laws. . . . To all this our prince made no reply, beyond inquiring where there was a good harbor, and making signs that he intended to depart. Accordingly, sailing round about the island, he put in with all his fleet in full sail, into a harbor which he found on the eastern side. The sailors went on shore to take in wood and water, which they did as quickly as they could, for fear they might be attacked by the

islanders; and not without reason, for the inhabitants made signals to their neighbors with fire and smoke, and taking to their arms, the others coming to their aid, they all came running down to the seaside upon our men, with bows and arrows, so that many were slain and several wounded. Although we made signs of peace to them, it was of no use, for their rage increased more and more, as though they were fighting for their own very existence. Being thus compelled to depart, we sailed along in a great circuit about the island, being always followed on the hill-tops and along the seacoast by an infinite number of armed men . . . We therefore resolved to put into some safe harbor and see if we might once again speak with the Shetlander, but we failed in our object; for the people, more like beasts than men, stood constantly prepared to beat us back if we should attempt to come on land. Wherefore Zichmni, seeing that he could do nothing, and that if he were to persevere in his attempt, the fleet would fall short of provisions, took his departure with a fair wind and sailed six days to the westward; but the wind afterward shifting to the south-west, and the sea becoming rough, we sailed four days with the wind aft, and at length discovered land."

This land proved to be Greenland, and to the harbor and the headland near it they gave the name Trin. In the distance they beheld a "great mountain which poured forth smoke," and a party of a hundred men were sent out to examine into this strange phenomenon. They returned after eight days and reported that "they had been up to the mountain, and that the smoke was a natural thing, proceeding from a great fire in the bottom of the hill, and that there was a spring from which issued a certain matter like pitch, which ran into the sea." Zichmni, being taken with the pureness of the atmosphere and the aspect of the country, conceived the idea of making a settlement, or, as Zeno calls it, "founding a city." As, however, his people were anxious to get home, he merely retained the row-boats and such of the men as were inclined to stay with him, and sent all the rest away under the command of Antonio. After twenty days sail to the eastward, and five to the south-east, Zeno found himself past Iceland, and in three days sail reached Frisland; and so ends the story.

We shall not enter here upon the inquiry how much of the pre-

ceding narrative is fact and how much is fable, nor have we space to notice the numerous conjectures which have been hazarded with respect to the identity of Icaria, Estotiland and Drogio. Mr. Major will admit the existence of but one fable in the whole narrative, viz: the story about Dædalus and the Icarian Sea. Yet even this he believes to have been based upon a fact. Accepting the view of Forster, he regards the name Icaria as an Italian's pronunciation and spelling of Kerry, the name of one of the southwestern counties of Ireland; but since it is quite unlikely that the story of Icarus was likewise picked up by Antonio Zeno on the Irish coast, he is forced to admit that this excrescence on the narrative is most probably the handiwork of the compiler. He suggests, as a probable explanation, that Nicolò Zeno, junior, found in his ancestor's letter the name Icaria only, without the story, and that its form suggested to him to engraft upon it the well-known Grecian fable. It is needless to observe that a man who could thus tamper with his family archives, was not incapable of eking out a slender story in other parts as well. The account said to have been given by the fisherman, Mr. Major thinks "to have been, for the close of the fourteenth century, a pretty good description of the state of things in America, down as far as Mexico." But, after his admission with respect to the above noticed fable, most readers will be hard to convince that these accounts of America did not come into Italy through Spain, in the early part of the sixteenth century, instead of through the north of Europe by way of Frisland. Again, Mr. Major remarks that the description of Estotiland "very fairly agrees with Newfoundland." But, to our apprehension, it applies much better to the Garden of Eden, and better still to the ideal world of the Hindoos in the centre of which stood Mount Meru, from whose summit flowed down the four divisions of the celestial Ganges.

To sum up the results of Mr. Major's investigation, his argument has gone far to prove, that the Zeno brothers actually did visit the Northern seas; that they assisted Earl Henry Sinclair in gaining possession of his earldom; and that they visited Greenland. (His discussion of this point has here been entirely omitted). The embellishments of the narrative, however, still lie under a grave suspicion, with a strong presumption that they are in a great

measure the deliberate invention of the younger Nicolò Zeno, the compiler of the whole account, who unscrupulously eked out his scanty documents with such material as he had at hand.

G. S. JONES.

THE VALUE OF PALEONTOLOGY.¹

I.

PALEONTOLOGY is an exact science. It embraces generalizations or laws obtained by induction, which may be deductively applied to the unknown. The first law is an illustration of the uniformity of nature's methods; namely, the law of the persistency of type. An organized structure once created, and existing under circumstances not hostile to its working, is adhered to with the greatest fidelity, and extended in time and space. This constant law is the key to this as to the other biological sciences, and occasionally surprises the student of evolutionistic proclivities. On this basis the possibility of reconstruction of the extinct forms of the past will always rest, and the certainty of the law is unconsciously admitted by every paleontologist who determines, names or classifies a fossil from anything less than a perfect specimen. It is assumed every day, and universally allowed, although occasionally even an expert is found who sometimes questions it, and still more frequently an inexperienced who does not read nature aright.

The application of the law is, however, various as the given terms, *i. e.*, the remains preserved, differ in significance. Thus, certain parts are common to all stoves, and distinguish them from all other articles of furniture; but certain other parts not only belong to a stove, but mark a given pattern of stove, since they belong only to it. A still more minute range of appearances is found only in one man's make of stoves, and others in that of another man. Hence, a person acquainted with stoves, sewing machines, etc., can readily determine the origin of a very small part by referring it to its proper kind and make.

¹ From the Introduction to Hayden's reports of the results of the Geological Survey of the Territories, Vol. II.

This law of persistency presupposes a knowledge of the pattern as essential to its deductive application. Hence a difficulty at once suggests itself as arising when a portion of an animal belonging to a new pattern is discovered. That patterns quite distinct from those known to zoölogists have existed in past ages, has been well proven by paleontologists. How can the structures of a species of such a kind be inferred from a fragment? Another law equally true with that of persistence, has been developed from the facts, but it is much more difficult of application. This is the one already defined in the pages of this journal,² under the name of the law of "successional relation." It is absolutely certain that the types of nature, whether primary or subordinate, form series of steps passing from one condition of relations to another. The application evidently is, that if a portion of an animal exhibits a form intermediate between two known forms or types, the remainder of the animal's structure possesses the same kind of intermediacy. This law is tacitly admitted and employed by paleontologists, but there is a difficulty of application in consequence of the existence of other laws now to be considered.

The first difficulty arises from our possible ignorance of one terminus of the series or line in which our fossil represents a stage. This objection is more theoretical than real, because the living classes and orders are the structural extremes of the lines of succession; nevertheless, among divisions of lesser range many have reached their culmination and disappeared in times past. These points of culmination must be known in order to ascertain the direction of the succession. Every discovery, however, is not that of an advanced position on such lines; hence this difficulty is of only occasional recurrence.

The preceding considerations all express different phases of the law of uniformity. I now refer to the law of variation, which is in apparent conflict with it. It is the law which expresses evolution as opposed to persistence of types. It especially limits the application of the last law, that of uniformity in succession, *i. e.*, that when one portion of structure occupies a position intermediate between two already known types, the remaining parts of the same animal or system of organs will occupy the same relation

²Penn Monthly, 1872, p. 229.

of structure to the corresponding parts of the known. This is not uniformly true. The law of variation intervenes, which states that it may occur, that while one part of an organization occupies a relation of intermediacy, the other parts do not exhibit exactly the same relation. It is by the unequal mingling of structural points that new lines of succession are marked out. Thus it is that the power of reconstruction from fragments is limited, but not sufficiently so as to justify the epithet "pretension," which has been applied to the claim made. Besides, two other laws remain, which are of great importance to the paleontologist.

Illustrations of the preceding laws may first be given. If a fragment of an animal be found, which contains a certain type of teeth known as the true selenodont, it is certain, in accordance with the law of uniformity of type, that the first bone of the hind foot of that animal (the astragalus) possessed two pulley-grooved faces, one above and one below, and not one only, as in most animals; also, that the lower pulley face was succeeded by two sub-equal toes, and that the lateral toes were either reduced in form or wanting. There is no mechanical relation between the structures of the teeth and foot; their accordance is simply a fact of type of a selenodont artiodactyle.³ Again; if we find a portion of a foot which presents a joint between the first and second rows of bones which form the sole, we are absolutely certain that the animal had the two outer ear bones external to the skull, forming a part of the lower jaw and the connecting rod by which the latter is attached to the skull. This is a type law of the bird and reptile. Again, if I find a part of a foot of the structure just named, where the first row of bones of the sole is united into one mass, and closely embraces the leg bone without being continuously united, I know that I have an animal with teeth, with a very long hip bone and a very long series of united vertebræ (or sacrum) resting upon it—in other words, a dinosaurian.

The law of uniformity in successional relation is well illustrated by the genus *Loxolophodon*. The first bone of the foot (astragalus) of this animal, exhibits characters intermediate between that of the elephants (*Proboscidea*) and odd-toed hoofed mammals (example, tapir); the remainder of the skeleton does the same;

³ Represented by a Ruminant.

the neck vertebræ are similar to those of the former, while portions of the skull resemble corresponding ones of the latter. The foot of a dinosaur is intermediate between that of a reptile and that of a bird; so are the sacrum and pelvis. The sternum of a frog of the family *Discoglossidæ* is intermediate between those of ordinary frogs and salamanders; so are the vertebræ and ribs.

Examples of the limitation of the latter rule are still more numerous. They may be produced from the three cases cited. Thus in the Dinosaur it might once have been said that the jaws did not partake of the intermediacy, because they all present teeth, and are never smooth, like those of birds. Yet birds with teeth have recently been discovered, which deprives us of the use of this character as a definition. In the *Discoglossid* frog the cranium is not intermediate in structure between the frog and salamander, but is that of a frog. In the *Loxolophodon* the toothless front of the upper jaw is not a general character of either of the orders which it stands between.

These difficulties arise from the existence of the subordinate variations or sub-types of a general or major pattern, and for their resolution require only a new application of the first law of uniformity on the lower plane. If the sub-characters defining the sub-pattern be known, the existence of one presupposes that of the others. The structure of an artiodactyle astragalus will not enable me to infer the character of the incisor teeth of the animal; for this I require some other, more minutely correlated portion. So I can infer the ribs and vertebræ from the sternum of the *Discoglossid* frog, but not the cranium; for this I require some part correlated with *Discoglossid* characters only, and not only significant of the relations to the orders of Batrachians, as are the characters mentioned, although it happens by the accident of discovery that none but such frogs possess them to-day.

The two laws which further aid the deductions of the paleontologist are those of mechanical relations and of embryonic parallelism. One structure requires another in order that an animal be viable. Thus long legs in a grazer presuppose a long neck to enable it to reach the ground with its lips. Hooked claws presuppose carnassial teeth or a hooked beak. To be properly poised on two legs instead of four, the weight of the viscera must be transferred backwards and the anterior regions of the body

lightened. This we find to be the case with birds and *Dinosauria*. The lower bones of the pelvis with the contained organs are thrown backwards, while the fore-limbs are lightened and the head reduced in proportionate size.

The parallelism of types with transient embryonic conditions of other types aids the paleontologist essentially in the classification or proper location of a specimen. Its relation to known series must be first determined, as this obviously precedes in reconstruction all application of the law of uniformity. Such reference having been made either to a new series or to a place in a known series, the considerations heretofore adduced come into view, but not sooner. Hence the law of parallelism is as essential to the paleontologist, as it is all-pervading and all-expressive of nature herself.

II.

Paleontology in its relation to Geology is a partially empirical science. Thus while its indications are definite for one locality, they have not identical significance for all localities on the earth's surface. The lower we descend in the scale of being, the more uniform over great areas are its phenomena; but among higher animals, especially vertebrates, the greater the geographical peculiarities as compared with the stratigraphical. Prof. Agassiz once said that the existing geographical faunæ are more distinct than the extinct faunæ of two consecutive epochs of geologic time, a statement justified by many facts. Hence it has been believed by some that fossil vertebrates cannot furnish conclusive evidence of the age of the rock strata in which they occur. For, say they, we have to-day existing on the Australian continent, animals that approach more nearly to those found fossil in the Jurassic formations of Europe than to any now living on the latter continent; so that were Australia to be presently submerged, and her strata and fossils again brought to light, the paleontologist would assert that the sun had not shone on that land since the days of the Jura. And so he would were he not at the same time a zoölogist; just as the bare zoölogist would err in the opposite direction of assuming the modern age of the European Jurassic beds, because they contain the living types of Australia. Thus a foundation fact of zoölogy properly applied is essential to the paleontologist; namely, that

the earth presents to-day four or more distinct faunal areas, the more prominent among which are the Australian, the South American, and the temperate lands of the Northern Hemisphere. Each of these possesses many peculiar forms of life not now found elsewhere. Has this distinction always prevailed? Paleontology answers decidedly in the affirmative, so far as extinct mammalia are concerned. There seems to be no doubt that the faunal distinctions have a very ancient origin, and are therefore to be first considered when estimating the age of strata from the contained mammalian remains. The explanation of this diversity is not yet attainable, but an important advance has been made by the discovery of the great similarity between the extinct forms of the Northern Hemisphere and the living or more modern ones of the Southern Hemisphere faunæ. The Jurassic character of much of the Australian fauna is known, while prevalent types of South America and Africa can be shown to have much relation to Eocene types of the north. In North America and Europe, tapirs, opossums, coatis, civets, kinkajous, lemurs and toxodonts belong to the Eocene; now these animals characterize the southern continental life, or as is the case with toxodonts, have but recently become extinct there. This mode of defining those faunæ is not, however, exact, since many modern types have found their way into them, especially in the case of Africa.

How then is life significant of chronological station in the earth's strata? Since very many forms of animals are so widely spread and at the same time so distinctly limited in range on the earth's surface to-day, the same order must have prevailed in past time and have been of equal significance. That this law of uniformity has prevailed in the past as in the present is amply proven by the paleontology of a single zoölogical area taken by itself. The apparition of types over the northern land area has been nearly universal. This fact has only been placed within our reach by modern investigations in North America; for until the sister continent of Europe-Asia was explored, no one could be sure what degree of individual peculiarity her extinct life might present. Now it is certain that the succession of Tertiary beds was mutually similar, and that the cotemporaneous deposits contained in a large degree similar life, and that intermediate stages of the one can be properly intercalated in the

vacant interspaces of the other. The resemblances between the Lower Eocenes of New Mexico and Wyoming and that of France are marked; similarity between the Pliocenes of the respective continents is evident. Descending in the scale, the parallels between the North American and New Zealand cretaceous are very apparent, and the faunæ of the Carolinian and Württembergian Trias were the same. The great interruptions in life marked by the appearance of great land areas near the close of the carboniferous and cretaceous periods are universally observed in the zoölogical areas of the Northern Hemisphere or *Arctogæa*. The close of the cretaceous everywhere saw the end of Ammonites, Rudisites, and Sauropterygian and Dinosaurian reptiles, in spite, in North America at least, of physical continuity of deposits.

Was this succession of interruptions of life universal over the globe, and do these trenchant lines justify the old assumption of repeated destructions and recreations of animal life? The former question has already been answered in the negative by the explanation of the characters of the existing faunæ of the southern hemisphere, where ancient types still remain in considerable numbers. Moreover, some of the later periods of both North America and Europe are characterized by a large predominance of forms of the corresponding southern continent. It is indeed evident that migration from the one continent to the other has taken place, and is amply sufficient to account for the abrupt changes in the life of each, without necessitating the intervention of creative acts. If glacial periods be dependent on cosmic movements, the obliquity of the earth's axis to the sun would cause an alternation of cold periods in the opposite hemispheres. This is well known as a most potent cause of migration and extinction, and the known relations of the faunæ would thus result from a greater or less alternate invasion of the one hemisphere by the life of the other.

But within the great time boundaries are distinct land faunæ, whose relation of distinction may not thus be accounted for. Thus the Miocene and Pliocene faunæ of Western America are entirely distinct, but with corresponding members. The alternate presence and absence of water areas adapted for the preservation of the remains of the animals will abundantly account for such minor interruptions. Such changing topography is well known as due to the slow vertical oscillations of the earth's crust.

The original question, the exactitude of the chronological significance of structural types, has been momentarily held in abeyance. Is paleontology a science so far exact as to furnish a chronological scale of terrestrial strata? The admission that the known tertiary faunæ, for instance, are but fragments of a continuous succession, would appear to invalidate any such claim. It would indicate that the restriction of a given type to a given horizon is only a matter of discovery, and that another accident may at any time give it a new range. This objection has but little weight. Fragments though they be, nearly related formations as the Tertiaries, are obviously the visible portions of a serial succession of life. Like the bright lines in a spectrum, the order is not disturbed by the temporary obliteration of a part of the colors, but the visible portions indicate the relations of the component parts with infallible certainty. The more universal the physical interruption the more far-reaching the break in the succession of life in any one locality, and hence the greater the value of remains of animals as indication of relation in time. The change of faunæ in Arctogæa at the close of the cretaceous is a case in point. A dinosaur, sauropterygian, ammonite or rudist are as definite indicators of the life that preceded the change as a tapir or civet-like carnivore is of the age that followed.

It has been stated that the life of the present period in the Southern Hemisphere is not homogeneous. The same is true in a still smaller degree of the Northern. Thus, if we include India in the latter, the elephant is a miocene form, and the true rhinoceros pliocene. Further north, the dogs are miocene. In North America the opossum, and probably the raccoon, are eocene; the wolves and foxes are miocene, and the weasels pliocene. Perhaps the cats first appeared in our pliocene. Comparatively few mammalian types mark the latest geologic epochs. Such are the ruminants, as deer, antelope and oxen, with the true horses, which all commence in the upper pliocene of Europe. Finally, man alone signalizes the last or glacial period, and is to reach his culmination in the ages that intervene between that great time boundary and one to come.

Thus a certain proportion only of the life of a given epoch is characteristic of it, that is, originates in it, the remaining members being legacies from preceding ages.

E. D. COPE.

PRESIDENT GRANT ON FINANCES.

THE parts of the President's message that have excited the most of comment and discussion are naturally those that relate to the currency and the south. On the former subject Gen. Grant still holds his position as an advocate of the resumption of specie payments, and as maintaining the possibility of that resumption at an early day. It is upon this last question that we fairly join issue with him. We have no belief in inflation, because we are no admirers of our inelastic "national currency;" but neither do we believe that that currency is depreciated. If we could replace one-half or even one-third of its volume by gold coin the night before to-morrow, so that gold would be worth greenbacks and greenbacks worth gold, and neither at a premium, the purchasing power of the currency would be exactly the same as it is to-day, and the new currency would have all the objectionable features of that which we now have;—at some times of the year it would be in excess, at others needlessly and injuriously scarce, because inelastic in volume.

"Why, then, does gold sell at a premium? Does not that mean that the greenbacks are depreciated in the same degree? Do not all the great lights of *the science* of Political Economy teach us that?" All those great lights insist, after Turgot, that "gold is a commodity like any other." And they teach, that if any commodity be scarce in any country, in proportion to the demand for it, then its market price must rise accordingly. That gold is inordinately scarce in this country is admitted on all hands. How could it be otherwise? We send vast quantities of it out of the country every year to pay the interest on bonds that are held abroad;—not government bonds only, but bonds and stocks of corporations of all sorts. We also purchase for gold a vast quantity of luxuries—far more than our exports of all sorts will pay for. Consequently both the importers, the corporations and the Government are really bidding against each other for gold. The Government avoids appearing as a bidder, and even puts on the appearance of a seller, by insisting on having its customs paid in gold. It makes its purchases through the importers, that is, and having bought too much, it comes into the market again to sell its

surplus and prevent the price rising too high. Now resumption of specie payments can only be effected through making gold so plenty or diminishing the demand for it so much—or rather by both—that it will cease to command a premium.

“But is not gold a fixed standard of value, the same always and everywhere?” Not by any means; there is no commodity but varies with the relation of the supply to the demand. From the beginning of our era to the discovery of America, its purchasing power—its price, that it—rose steadily. From that till the revolt of the Spanish American colonies, it fell. From that till the gold discoveries of the Ural, Australia and California, it rose again. From that till our own day it is falling. It has never fallen in anything like the same ratio as the increase of its price, because its influx into a wide-awake country stimulates industry and production, and creates an increased demand for it, that all but equals the increased supply. Nor is it, like other commodities, sure to go wherever it is most needed, but only wherever it is of most use, which is quite another matter. It drifts to where there is most of it, because there its application to industry is most developed, and its power to purchase is the greatest. It drifts from the poor to the rich countries. We have less of it, not because paper has driven it out of use, but because it has gone to the markets where it purchases most.

“But does not the inflation of the price of all sorts of commodities show an excess of currency and its depreciation?” Prices may have risen without being inflated. The prices of labor, of raw material and of food rise always with the advance of a country in varied industry, but in different ratios. They have done so in America under the tariffs of 1861-74, because they were all unnaturally low when we depended upon foreign countries for a market, and the laborer had small choice of occupation. They have risen also in France and Germany, and the advance in food and other general expenses of living is greater in the latter than with us. We do not say that it is as high yet; yet Germany pays in gold, and if our prices are inflated hers are more so. If everybody east of the Alleghanies were to go back to farming, provisions would be cheap again, and labor cheap also. But the comfort of every class, except perhaps of those who live on incomes that are absolutely fixed, would be very greatly diminished.

The only mischief that is really alleged as wrought by our paper currency is, that its variation in value leads producers to insure themselves against its fluctuations by asking high prices. If in any case this is true, the producer is acting under a false impression, which should in every way be corrected, instead of being publicly endorsed by the head of the nation. Gold rises and falls in value with the relation of its demand to its supply, without paper money varying in the least. And even that variation has become so slight during the last year, that the use and the power of the Gold Room have alike vanished.

“But would not its contraction bring our paper money to par with gold? and is it not the duty of the country to appreciate its currency when that currency is not at par with gold, so that its currency and that of the world may be of equal value?” This last result would certainly be a convenience, just as an international system of weights and measures must be. But if our currency be not depreciated (and we believe it is not), it cannot be its duty to make it as dear and as scarce as gold is. Depreciation can only arise from two causes—the bad credit of the issuer and the excess of the amount of issue. The price that Government bonds bring disposes of the former supposition; the suffering that Secretary McCulloch inflicted upon the country by his ill-judged contraction refutes the latter. It was further refuted by the panic of 1873. Enough greenbacks could not be obtained to carry on the business of the country. The very men who now applaud the President for advocating resumption, howled round him that black Sunday as if they had been the Central Park Menagerie broke loose, begging him to “issue the reserve.” But when greenbacks were scarcest, they were not as scarce as gold, and gold still brought a premium. Now, who ever heard of a currency depreciated because of over-issues, and at the same time in high demand?

Gen. Grant can only propose that the treasury shall collect more duties, and hoard the gold till it is strong enough to resume. But that will only raise the price of gold by making it scarcer than ever. And where are the increased customs to come from? Not from raising the existing duties—no one proposes that. No, but by lowering them, and thus cheapening articles of foreign production, to the increase of their consumption. And every article

thus consumed has to be paid for with gold sent out of the country, so that this change will simply remand the day when resumption is possible to the indefinite future.

Suppose that the Treasury had in its vaults all the gold in the country, and offered to resume specie payments, what would be the outcome of the attempt? Suppose that I have in my possession all of an article that there is in a country, and offer to sell it at less than market price, and that its quantity is so small that capitalists have already been able to create profitable corners, by making it scarce; how long will it take me to get rid of my stock of that article? Just as long as would be needed to empty the National Treasury of its gold. The proceeding would be a "big thing" for the Wall street men, and for no one else. The Government would come out of the tussle poorer by several millions, that had gone into the pockets of speculators, and the Gold Room would be prosperous as ever it was.

What then can be done towards resumption? Are we powerless? (1.) Persist in the strictly protective policy that will reduce our purchases abroad to a minimum, and turn the balance of trade in our favor. But, mark you, as soon as it turns we shall have the battle of Armageddon with the Bank of England. The Bank screw will be put on and kept on as it was last winter, to turn the current of gold back to its vaults. Under the Act of 1844, the directors have no choice. They must raise the rate of discount when gold leaves them, and diminish the amount of their loans, forcing those who must pay by a given date to raise money by wholesale sacrifices of their goods in the Continental and American markets. We will again have steel rails selling in America at twenty and thirty dollars a ton less than the cost at the Sheffield factory. Only steady persistence will carry us through a struggle that must come some day.

(2.) Our bonds must come home and be held at home. Now that North Pacific and other fancy stocks are out of the way, they furnish the best possible investment for the small savings of our agricultural classes and our workmen. France has rallied from the financial exhaustion into which imperial folly plunged her, because just those classes were strong enough and patriotic enough to loan the Government all that it needed. With the demand for these and all other safe bonds already created by the National

Banking system, and the growing power and willingness of the people to keep the national debt in their own hands, we look to see the day when not a dollar of gold will go out of the country to pay interest in the money markets of Europe.

But were we back to specie payments to-morrow, the millenium would not be here: we are ill off, not in having bad money, but in using so much of it, good or bad. Our financial system is as yet only half developed. While our ways and means of payment in our great cities are such, that most of the large transactions are effected by means of money of account, without the intervention of either gold or paper, business between different parts of the nation, especially between the East and the West, and often between adjoining counties, and between near neighbors, is effected in the old and expensive manner of making payments by the use of money, legal tender. Could we extend our credit system of payments, the volume of money necessary for business purposes would be vastly diminished. As it is, the best change that we can make, and the only one that can lead to a permanent return to specie payments, is to establish banking on the principle of freedom and competition. Therefore, let it be enacted that the comptroller of the currency issue to individuals or to associations of individuals, for the transaction of banking business, national currency to any amount, upon due proof of organization, in accordance with the following conditions: Let it be enacted that each stockholder shall be liable for losses, for a sum equal to the amount of his stock. That national currency be issued to such institutions upon due proof that a deposit of United States bonds has been made with the Treasurer of the United States or with any one of the Assistant Treasurers of the United States. That such issue shall not exceed ninety per cent. of the par value of the bonds deposited as aforesaid. That banks shall hold a reserve in legal tender of the United States or in United States bonds, of twenty-five per cent. of the amount of their deposits. That the said reserve shall never be kept with other banks. That banks shall not be required to hold a reserve for the redemption of their circulation—that being secured by the United States bonds deposited with the Treasurer of the United States, or with the Assistant Treasurers, by the liability of the stock holders for losses, and by the capital of the banks not invested in

United States bonds. That banks shall be subject to no national tax. That banks shall pay no interests on deposits. That banks shall redeem their circulation, on presentation, in sums not less than fifty dollars, in legal tender of the United States or in United States bonds, at the option of the bank. That the comptroller of the currency, or any assistant treasurer of the United States, shall issue, in times of financial panic, national currency to the banks in amounts not less than fifty thousand dollars, upon due proof of the deposit of United States bonds. That banks shall receive no interest on United States bonds deposited to secure the extraordinary issue of currency. That nothing in this act shall be construed to authorize any increase of the principal or interest of the public debt of the United States.

The bonds of the United States being payable at maturity in gold, the notes issued by the national banks are therefore also payable ultimately in gold.

The four and four and a half per cent bonds of the United States would at once find a large market at par among those who desire to transact a banking business, and the credit of the United States would at once be enhanced, and the credit system would be extended to all parts of the country alike.

Thus nearly all that concerns the relations of debtor and creditor would be settled by the aid of the banks, the clearing houses, and the easy and inexpensive forms of exchange between different parts of the nation that would follow a general introduction of this system of banking.

The law proposed creates a reserve to meet the excessive demands made in times of panic and financial crisis, and also prevents the currency from becoming too abundant by the banks being obliged to redeem their notes on presentation in sums not less than fifty dollars, in legal tender of the United States or in United States bonds, at the option of the bank. It also makes possible the general use of the credit system, a system more valuable and less expensive than that now in use, or than any yet proposed. It further insures the validity of the note and the steadiness of the measure of value. The amount of the currency and the requirements of the country would always be commensurate; that is, the currency would increase and diminish according to the natural law of supply and demand.

That there may be no inflation of the currency by the increase of the issue of National Bank notes, let the government cancel the legal tender notes as fast as the comptroller issues currency to National Banks, and continue the work until there are no legal tender notes in circulation.

NEW BOOKS.

A RAMBLE ROUND THE WORLD. 1871. By M. Le Baron de Hübner, formerly Ambassador and Minister, and Author of "Sixte Quint." Translated by Lady Herbert. Pp. 657. Price \$2.50. New York: Macmillan & Co. 1874. Phila.: Porter & Coates.

A bare glance at the short preface and the table of contents of this volume gives assurance that we have opened a book of travel of unusual interest. Despite the somewhat misleading title of the translation, we find before us the notes of no aimless and desultory rambler about the earth, but of an intelligent and energetic tourist who has set out on his pilgrimage with a clearly defined purpose, and who, as we can judge from the dates and list of places given in his itinerary, has made the most of his eight months between Queenstown and Marseilles. In a few vigorous sentences, which at once place us on good terms with our guide, we see the objects of our journey distinctly set forth. Our purpose is: "To behold, beyond the Rocky Mountains, in the virgin forests of the Sierra Nevada, civilization in its struggle with savage nature; to behold in the Empire of the Rising Sun, the efforts of certain remarkable men to launch their country abruptly in the path of progress; to behold, in the Celestial Empire, the silent, constant, and generally passive—but always obstinate—resistance which the spirit of the Chinese opposes to the moral, political, and commercial invasions of Europe." Yet our guide will not always be engrossed with his philosophical objects. On the way he means to amuse himself; that is, to see all he can which is curious and, to him, new; and every evening he will note down in his journal what he has seen and what has been told him during the day. On such a tour and in such company we may be sure that our time will be passed profitably and pleasantly. In fact the volume from its opening sentence to its close contains few, if any, pages which the reader will find dull or will care to "skip," while it contains many pages which will bear to be re-read. Opening it at random, we extract the following passage to illustrate the author's style of narration and habits of thought.

"It has often been remarked by travelers how much the sol-

emnities of the Buddhist temples resemble the ceremonies of the Catholic Church. Close to this hall is a sanctuary of Buddha—a sombre, narrow, but immensely high chapel, entirely filled by the colossal statue of the god. The darkness adds to the terrors of the spot. To see the details, and reach up to the huge ears and shoulders of the divinity, we must go up several stories.

“Alongside are the apartments, now in ruins, which the Emperor, Yung-mèn, built for his thirteen sons, to prepare them for an existence which was more claustral than princely. The rooms, opening out of a corridor with circular doors, are very small, but rich in pretty details. The house is built against the northern wall of the town. I cannot say how delighted I was with this fine but savage picture.

“The great interest of the day, to me, was the striking contrast between the Temple of Reason and the Sanctuary of Faith—between intellectual exercises and ascetic practices—between philosophic speculations and superstitious belief—in a word, between Confucius and Buddha.

“Pass from a Wesleyan chapel, with its four bare walls, to the pulpit of St. Peter's during pontifical high mass, and you will find a less striking difference. Confucius was a moralist. He gave maxims and counsels full of wisdom; but politely declining the discussion of a future state, he sought the source of good and evil in the reason and will of each soul.” (p. 493.)

We cannot, however, dismiss the volume with unqualified praise. On a tour like this, in the pursuit of knowledge, it is not enough that our guide is entertaining, that he can draw, on occasion, from a varied store of learning, and that his judgments are generally marked by solid sense. It is likewise requisite that he shall observe circumspectly, that he shall be cautious with respect to the sources from which he draws information, and above all that he shall so temper his descriptions as to leave on his reader's mind a true image of things as they may actually be seen, not a distorted and discolored picture. In the course of his chapters on America we are able to test him on these vital points, and the result is not wholly satisfactory. Not that we can find fault generally with his comments on things American, which are as free as possible from any taint of foreign prejudice, but occasionally we meet with passages which lead us to suspect that sometimes in the fervor of composition he has yielded too readily to his imagination, and has subordinated strict accuracy of statement to effectiveness of coloring and setting. We are speaking of the impressions we are to gain through him of foreign places and customs. Let us ask what impression of America his European reader is to gain from a passage like this:

“In the journey from New York to the official capital of the United States, there is nothing which strikes the traveler as very

different from what he meets with in an ordinary European railroad. But when we turn our steps towards the West, the look of our fellow-travelers gradually changes. Bankers with their clerks, elegantly dressed ladies from Boston, Philadelphia, or Baltimore, officials from Washington—all those people, in fact, whose cosmopolitan aspects remind one of their like in Europe, disappear from the scene. They are replaced by a lot of men, mostly young, bearded, ill-dressed, not over-clean, armed with one or sometimes two revolvers, wearing round their waists great coarse woollen bags, which are generally empty when they are starting for the Far West, and as commonly full of gold on their return." (p. 31)

This is the opening portion of the chapter which narrates our traveler's journey from Washington to Chicago. In the course of the same chapter we read the following passage: "From time to time the brakemen rush upon the platform, drag the wheels, put on the brakes, and disappear again by slipping into the next carriage. To judge by their hurry, you would think it was a question of life or death. The guard, too, passes and re-passes, never without a gracious smile or a courteous word to me, as 'Now, Baron,' or, 'Well, Baron, you're not gone to bed.' Sometimes, as a variety, he says nothing, but merely presses my hand. Each time I ask him, 'Well, how fast are we going, Mister?' And his answer invariably is, 'Sixty miles an hour, Baron.'"

Again, on the Pacific railroad, "We are going from fifty to sixty miles an hour, and the conversation does not flag."

A few such passages as these ringing in our ears detract somewhat from the confidence with which we follow our guide from the known to the unknown—out through the Golden Gate, across the broad Pacific, among the unfamiliar scenes and customs of Japan and China. It is difficult not to be fascinated by his narrative; but we are never quite certain where to draw the dividing line between naked truth and its rhetorical embellishments.

If we have laid great stress upon this weak point in the volume before us, it is because it professedly belongs to the first order of books of travel, and deserves, therefore, to be judged by a high standard.

THE AMERICAN EDUCATIONAL ANNUAL. A Cyclopædia or Reference Book for all matters pertaining to Education, comprising a history of the past and present school systems, and school legislation in all the States and Territories; a History of Land Grants and the Peabody Fund; Geographical and Scientific Discoveries during 1873-4; the National Bureau of Education; Civil Rights Bill; Educational Gatherings during 1874; Educational Systems in other countries; Voluminous American school statistics for several years past; names of American Colleges,

Universities, Theological, Normal, Local and Scientific Schools; names of Educational Journals; Sketches of Prominent Educators deceased during 1873-4, and lists of School Books published during the year. Published annually. Vol. 1. 1875. New York: Schermerhorn. Philadelphia, Bancroft. (Pp. 291, 8vo.)

This sesquipedalian title almost takes away one's breath, and yet it does not give all the contents of the book itself, for the State Superintendents have given brief biographies, prefacing the report of their State work,—in which there is furnished forth a fair transcript of the way in which the art of pedagogy is acquired in this country. The only one as to whose antecedents we are left uninformed is the Hon. H. N. Bolandér, State Superintendent of Public Instruction in California, who was kind enough to forward his tickets when running for office, but has failed to make a single response to letters constantly written to him from the 22d of May, until the 10th of September, (enclosing numerous prepaid envelopes); a touch of pathos this last, and altogether suggestive of the way in which such items are made and gathered up to show our present condition. However, it is gratifying to find that the men entrusted with the business of superintending education throughout the States of the Union, are for the most part men of fair training and good opportunities of instruction, while the few exceptions seem to be those who have atoned by zealous hard work for the want of early advantages. There seem to be among them representatives of all races, black, white, mixed, Indian and half breeds, of all nationalities, Scotch, German and natives of all our States and Territories, of every religious creed, of both sides in the recent great struggle, Confederate and Union, and yet they are working on in unconscious harmony, to secure the best schools they can, for the small power given them by law. In only one case, that of Connecticut, is there any evidence of an endowment derived from the Western lands, once and again scattered with such lavish waste on all sorts of objects, and even there it is supplemented by a tax well used and cheerfully paid. The great array of facts and figures gathered in this volume, serves to show how little of the real spirit of public education can be learned by a mere statistical display. We all know just where to put our fingers on the States in which Free Schools have made a prosperous population, and on those in which ignorance has been sedulously cultivated, yet as long as the comparative returns are only those of each State in various years, it is impossible to see where the fault lies and where the remedy is to be found, why one Commonwealth should be full of zeal for education and another lagging far behind. The cause like the result must be traced in the local history of our separate sections, and it will take generations yet to come, to correct the faults of the past.

But more than all, we know that mere returns of figures show nothing of the methods of education. The whole country is full of imperfect systems, undigested plans, inchoate schemes, intended to render easy the difficult problem of national education. The mere multiplication of what we are pleased to call colleges and universities, is no more an evidence of a real improvement in the higher education of our young men than is the existence of wholesale laws to provide schools for a whole population, when the laws are not enforced and no provision is made of school houses, teachers, and the other primary requisites of popular instruction. Even the existence of splendid school buildings is only evidence of good intentions, and not at all of their satisfactory execution. Still there is a glow of enthusiasm in the statement reported from Colorado, that starting with nothing in 1866, to-day it has one hundred and thirty school houses, valued at more than \$300,000, sixteen thousand school children, and two hundred and fifty-two teachers; that Denver boasts three \$80,000 school buildings, with a fourth in progress, and that Black Hawk and Central City, both mining towns in the very heart of the Rocky Mountains, and within twelve miles of the snowy range, competed in 1870, the former a \$15,000 and the latter a \$20,000 public school house, the first in the territory. Poor rock-bound Arizona reports the value of its school houses and furniture in 1873-4 at \$6,247.00, with three hundred and forty-three scholars out of one thousand six hundred and sixty children in the territory between 6 and 21; but the Governor and ex-officio Superintendent of Public Instruction, reports in July of 1874, that 'we now have free schools in every district in the territory,' and that there will be revenue enough to maintain them at least six months in every year.

The work of the Peabody Fund is a matter well worth studying, as it shows how efficiently men will help themselves when help is given to them only on condition of their doing all they can first. Out of their income of \$120,000, the trustees give at most to a school of 100 pupils \$300; to one of 200, \$600, and so on; but this is always on condition that the district shall pay at least twice, and usually much more than twice, the amount given from the Peabody Fund.

The value of such a volume is in no wise in proportion to the space assigned to the various subjects contained on its long lists, but it is at least a good thing thus to begin to collect and collate school facts and statistics in such a manner as to supply a fair survey of what is being done in all the states of the Union, and to supply, too, some means of comparison with foreign systems and methods.

Brief, hasty and imperfect as are the sketches of education in other countries, the subjects are well chosen—Austria, England,

France, Japan, Prussia, Russia, and Switzerland—but one must know more of the subject than the compiler to be able to read between the lines, and to see that in Russia, for example, education is as yet only slowly finding its way into that vast empire, while in Germany it is no longer a question of quantity but of quality, the last, best, almost final condition of the problem. Here we are still busied in the earlier stage of trying to find out how we can reach the most pupils, and the "Annual" serves to show how it is done; but we must look to some other and higher authority to learn how much we give our pupils in the way of real education, and how far there is any real growth in education other than mere numbers.

THE SPECTROSCOPE IN ITS APPLICATION TO MINT ASSAYING. By Alexander E. Outerbridge, Jr. Read before the Franklin Institute, October 21, 1874.

The authorities of the Mint have for some time past been carrying on a series of experiments under the supervision of Mr. Outerbridge, aiming at the discovery of a gold test by the use of the spectroscope. The present method of assaying is complicated, laborious and expensive, and it was hoped that the instrument which had proved so marvellous a guide as to the qualitative composition of bodies, might discover like power quantitatively.

Similar experiments are being carried on at the Royal Mint by Messrs. Roberts and Lockyer. Indeed, the theory of such a quantitative analysis originated in the observation of Mr. Lockyer that, upon causing the spark from an induction coil to leap a greater distance through the air by separating the electrodes, the lines of the spectroscope were broken in the middle and that the hiatus varied with the different alloys. Mr. Lockyer argued from this that the fineness of various alloys could be determined by the length of the broken lines.

Mr. Outerbridge, after thorough investigation, is satisfied that this process, though it does indicate roughly—we speak comparatively—the differences in alloys of the precious metals, will not serve as a reliable test. The eye cannot detect the differences in the length of the spectral lines in alloys varying in fineness within 7-100ths. Besides a more substantial reason, that the amount of metal tested in a spark is inappreciably small, and could not represent the fineness of an ingot with certainty. It results, therefore, that the spectroscope cannot be relied on as a means of quantitative analysis; but the reader of Mr. Outerbridge's paper will find that many observations made in reaching this conclusion give the investigation a positive as well as a negative value.

EULOGY ON CHIEF JUSTICE CHASE, delivered by Wm. M. Evarts, before the Alumni of Dartmouth College, at Hanover, June 24, 1874. Published at their request. Hanover, N. H. J. B. Parker. 1874. Paper, 8vo., pp. 30. [J. B. Lippincott & Co.]

The American youth is not stirred up to the importance of good and useful citizenship by the frequent sight of bronzes on the street, commemorating such lives of departed countrymen. But the intense pride and interest which the Grecian cities felt in their worthier citizens, his Alma Mater feels for every distinguished son. Her kindly eye follows him on his way up, choosing him now as an examiner, now as an orator, now as a trustee, and finally honors his memory by a eulogy pronounced in the presence of her whole family. The life of Chase is peculiarly fit to set before the young as an example. It was no mushroom growth, but the slow development and training of an honest, courageous and able mind ever in one line. Without flying here and there after the prize of the present, he gave himself for ten years after his admission to the bar, entirely to his profession. For the next twenty years he devoted himself to the Anti-Slavery cause prominently in the offices of his own State and in Congress. Trained by these years of constant and thorough labor, he was lifted with the Republican party by the war to the very crest of power.

The Republican party, however it may have changed since, displayed a splendid front at the beginning of the war. It had the purity and honesty of long defeat, and the courage and humanity that spring from devotion to the cause of the oppressed, and it numbered among its leaders, Lincoln, Seward, Stanton, Sumner, Chase, the greatest men of our country.

From the position of Secretary of the Treasury he was called to that of Chief Justice of the United States. Only lawyers can appreciate how solid must have been the legal acquirements of the first ten years of his life, which after an interval of over twenty years supported him with distinction and respect in the highest judicial position in the country.

Mr. Evarts touches upon, without explaining, the inconsistency between Mr. Chase's views as Secretary of the Treasury and as Chief Justice, as to the legal tender question. Mr. Chase himself said that although in favor of the issue of greenbacks, he was reluctantly forced into consenting that they should be made a legal tender. But whether this be so or not, what manly men most admire is independence of opinion, and the clearer the change in opinion appear, the more courage it required for the Chief Justice to avow it.

No better narrator could be found of Mr. Chase's conduct when presiding in the Senate Chamber over the trial of the impeach-

ment of President Johnson, than Mr. Evarts, who took so prominent a part in it himself. To the judicial firmness and impartiality of the Chief Justice, above all else, the orator attributes what, when the passion of party is past, we must consider a national blessing, the acquittal of the President.

Many a man has gained success, and the highest success, suddenly, but to deserve distinction, and to ornament it when attained, demand the moderation, fortitude, learning and experience that are the children of toil.

NATHANIEL VAUGHAN: PRIEST AND MAN. By Frederika Macdonald. 12mo., cloth, pp. 404. Price \$1.50. New York: Asa K. Butts, [J. B. Lippincott & Co.]

We took up this book for review with very decided feelings of aversion; whether from something in the title, or from the "get up" of the book, which is cheap, we cannot tell.

It is the story of a clergyman of the Church of England, settled in a retired village, his immediate neighbors being, with few exceptions, ignorant and rather brutish peasants. He is a Ritualist; and our author's hatred of Ritualism, of conservatism, and of social order in general (for she is evidently a lady of "advanced" opinions) forms the key-note to the book. Indeed, it would not be unjust to say that she personifies Ritualism, calls it the Rev. N. Vaughan, and by making the man as disagreeable as she possibly can, shows her disgust for the thing he represents.

The book is principally concerned with an analysis of this man's character, enough of his life being told, of his desires and aims at the opening of his career, of the opinions he adopted, and the standard he set up to judge himself and other people by, to illustrate each step in his development, and to lead up naturally to the crisis of his life. For we must say this part of the novel is very well managed, and, putting aside the exaggeration which the author's method inevitably produces, there are doubtless men in existence very similar to poor Mr. Vaughan—men who, beginning by persuading themselves of the truth of opinions which they call the teaching of the church, and which to us seem almost blasphemous, and then subjecting themselves to rigid self-examination, end by becoming like morbid, unhappy, *sickly* specimens of humanity, as this clergyman.

The other and less prominent male characters are a Mr. Fabrice, a free-thinker; Hugh Braham, whose early life and education are guided by Mr. Vaughan, but who breaks loose from him, and is won over by Satan, in the shape of Mr. Fabrice; and several others who are of no special importance. Two of the most prominent female personages are a daughter of Mr. Fabrice, to whom the author, without rhyme or reason, gives the silly name of Missy

Fay, and a servant of Mr. Vaughan's, Faith by name, brought up in his peculiar system. Hugh and Miss Fabrice fall in love with each other, and the frequent descriptions of how they looked into each other's eyes, how they talked, and how they sat silent, etc., etc., are sufficient to spoil the best novel ever written.

But this is by no means the only love story of the book, for Faith, the servant girl, has the audacity to love her master, (who is too preoccupied with his own troubles ever to guess at such a state of affairs,) and hates everybody whom she conceives to stand between her and him with all the warmth of a sensual and jealous nature—especially Miss Fabrice—and Mr. Vaughan's hopeless passion for the latter makes the fourth love affair. Notwithstanding that he believes her to be on the high road to perdition, and that she scorns him and all he thinks most worth living for; above all, notwithstanding his belief in the doctrine of clerical celibacy, and his conviction that his besetting sin is his desire to marry this girl, it is this passion that masters him, and that drives him to the very verge of crime.

Of course, he sees the mutual love of Hugh and Miss Fabrice, and mourns over it, as he thinks, on account of its manifest impropriety. Further, by a marvelous course of reasoning, which, however, we imagine to be not altogether untrue to nature, he persuades himself that it is his duty to God to stop the marriage by fair means, which he uses at first, if possible; or, failing these, by foul means, to which he at last resorts.

As it becomes more certain that Hugh's love is returned, so does Mr. Vaughan's hatred for the young man increase; and the picture of the unhappy wretch stalking about at night, carrying an immense club, and breathing battles, murders and sudden deaths, is anything but pleasant to contemplate. He is saved from what the reader feels sure is the fate marked out for him by a dream, which does thoroughly awake him to a sense of his danger, and a glimpse of common sense being vouchsafed him by Providence, (in whom, to do her justice, our author evidently has some kind of belief,) he determined to flee from temptation, which we are quite sure we should have done long ago, if in his place, and going to the continent, after some wanderings, enters a monastery, where we lose sight of him.

There is one character we have purposely left to the last, as it is decidedly the best in the book; we mean Winifred Deane, a little child, of whom Mr. Vaughan assumes the guardianship, and whose story is told very sweetly. Though an uncommon and, to adopt the nursery phrase, an old-fashioned child, her character is very lifelike, and her childish fears and perplexities, her fixed purpose of finding the sister from whom she has been so cruelly separated, and especially her undoubting belief in the accomplishment of her object, show a considerable knowledge of child-

character; while a certain heartiness in the style whenever she is writing about the child, evinces a love for children in the author which will appeal to all who are capable of appreciating their innocence and beauty.

Altogether the book is decidedly superior to the average novel of the present day, though we do not like the object of it, or approve of all the sentiments the author takes most pains to inculcate; but, while we see she has endeavored to model herself, at least in her analysis of character and motive, upon "George Eliot," we cannot agree with the *Westminster Review* in thinking the book worthy to be one of that author's earlier efforts, and do not anticipate that it will find many appreciative readers.

BOOKS RECEIVED.

Tables for the Determination of Minerals by those physical properties ascertainable by the aid of such simple instruments as every student in the field should have with him. Translated from the German of Weisbach. By Persifor Frazer, Jr., A. M. Philadelphia: J. B. Lippincott & Co.

A Brief account of the Finances and Paper Money of the Revolutionary War. By J. W. Suckers. 1874. Philadelphia: John Campbell & Son.

The Maid of Orleans, an Historical Tragedy. By George H. Calvert. Crown 16 mo. gilt. Pp. 134. New York: Geo. Putnam's Sons.

For Better, For Worse. A tale of First Love: from "Temple Bar." Price 75 cents. T. B. Peterson & Bro. Philadelphia.

History of the Conflict between Religion and Science. By John W. Draper, M. D., L. L. D. The International Scientific Series XII. New York: D. Appleton & Co. Philadelphia: Porter & Coates.

The Phantom of the Forest: a Tale of the Dark and Bloody Ground. By Emerson Bennett. 12 mo. cloth. Pp. 503. Price \$1.50. Philadelphia: Claxton, Remsen & Haffelfinger.

Justin Harley: A Romance of Old Virginia. By John Estlin Cooke. Illustrated by W. C. Shepperd. 12 mo. cloth. Pp. 301. Price \$1.75. Philadelphia: Claxton, Remsen & Haffelfinger.

Thoughts on Revelation, with special reference to the present time. By John McLeod Campbell. 12 mo. cloth. Pp. 200. Philadelphia: Claxton, Remsen & Haffelfinger.

Conchologia Cestrica. The Molluscous Animals and their Shells, of Chester county, Pa. By William D. Hartman, M. D., and Ezra Michener, M. D., with numerous illustrations. 12 mo. Pp. 114. 1874. Philadelphia: Claxton, Remsen & Haffelfinger.

Reminiscences of George La Bar, the centenarian of Monroe county, Penna., and incidents in the early settlements of the Pennsylvania side of the river valley from Easton to Bushkill. By A. B. Burrell, with a portrait. Crown octavo. Pp. 111. Price \$1.00. Philadelphia: Claxton, Remsen & Haffelfinger.

Historical Chart, or History taught by the eye. By Robert H. Lamberton. Philadelphia. Claxton, Remsen & Haffelfinger.

THE
PENN MONTHLY.

FEBRUARY, 1875.

THE MONTH.

THE news from Spain makes every other item which has reached us from Europe during the past thirty days seem unimportant. It has stopped at once the discussion, already growing less fiery, to which Mr. Gladstone's pamphlet has given rise in England; turned the eyes of all men from Bismarck and his contest with the Ultramontanes, and deprived even a crisis in the French ministry of its usual momentary interest and importance. The proclamation of Alfonso, Prince of the Asturias, as King of Spain, seems a strange ending of the movement which, six years ago, drove him and his mother into exile. During that time the unfortunate Spaniards have passed through every form of anarchy—so far as anarchy can be said to take a form—from that which they called a Regency, through the Republic, back to a Regency again. They have known a variety of rulers. Prim and Serrano, Amadeo, Figueras, Castelar and Serrano, have each in turn exercised the highest powers of the State, and as far as peace and safety and stability were concerned, all governments seem alike to have been wanting. The expulsion of Isabella was the natural result of the government for which she was responsible, and seemed at the time to promise better things for Spain. For the power, fortunately, fell into the strong hands of Prim and Serrano, who did not suffer the pendulum to swing too far. Had the former

lived he might have strengthened the hands of Amadeo sufficiently to have established a constitutional monarchy, and perhaps counteracted in a period of doubt and danger the tendency to abdicate, which, it is said, is constitutional in the House of Savoy. The departure of the Duke of Aosta left Spain without a head, the prey of adventurers of whom Figureas was undoubtedly the ablest and most respectable, but the failure of the latter made Castelar's attempt to found a Republic on the basis of his dictatorship well nigh hopeless from the first. The Spaniard's idea of a Republic is not unlike the Frenchman's, and his views of liberty resemble those of an ingenuous Confederate, who being asked on his capture during the "late unpleasantness," why he took up arms, answered, "to defend my rights;" and being questioned further as to what rights of his had been infringed, remarked, "I don't know what, I'm sure, but I'll be hanged if I won't have 'em." The *coup d'etat* which overthrew Castelar and restored the Duke de la Torre to power, set up a regime which every man knew would be but temporary. The teachings and inclinations of Serrano are no more Republican than those of MacMahon, and it was not to be expected that either would become the Apostle of a creed he did hold. The Spanish Republic has been the vestibule through which the Bourbons have returned to power: The French Republic may be but the door already pushed ajar, through which a Bonaparte will enter. Nor is there anything in the traditions or in the character of the Spanish people to make them practical republicans. Enthusiasts like Castelar, who are students of history and vehement lovers of liberty, are very few among them. What the ordinary Spaniard who loves Spain desires most, is peace and stability—a firm and fixed administration of the laws. These are the things he hopes for, and he cares little in what form they come to him. With the experience of the last four years, with a government of doctrinaires calling itself a Republic, beset with schemers and adventurers of every kind, threatened without by Carlists and within by intriguers, in the interests of Montpensier to-day or of Alfonso to-morrow, and incapable always of self-defense, it is but natural that the better classes of the Spanish people should turn gladly even to the uncertain ground on which the young Prince of Asturias stands, as a sort of neutral ground on which all parties can unite. The Prince

is the son of a Queen of Spain, whatever doubt or certainty may exist about his paternity. He is the representative of an ancient monarchy and a long line of kings, under whom the people, much as they have suffered, have not had to endure worse things than the anarchy of these years of so-called freedom. He is young, and youth in a Prince is attractive and awakens enthusiasm in a people naturally monarchical. And he promises them a constitutional monarchy after the English form. No one, not even himself, claims for the young monarch the throne of an absolute king according to the old ideas. To call Alfonso legitimate in any sense would be a grim joke, which not even his estimable mother would, perhaps, care to perpetrate. So the drama of the Republic is over, and Serrano, with the worn sceptre ready in its dusty case, waits in the palace at Madrid with a paternal interest, not unnatural, the coming of a king of whom he is the god-father; although it may be added that to call him so seems to those acquainted with the Spanish history of the last twenty years to be taking the name of Deity in vain.

THE death of Ledru-Rollin removes from French politics another well-known name. It does not seem unnatural in the changes of French history for the guardian of the court jester of a Bourbon king to become a powerful man in revolutionary France, and for a time one of the most noted politicians in Europe. Ledru-Rollin was a man of undoubted ability, but since his return to France he has been rather the shadow of a name than an active force in politics. His funeral was witnessed, it is said, by upwards of 100,000 people, and was conducted with that strict disregard of all ceremonies of a religious nature so common in the obsequies of a French Radical. Religion and Conservatism, Radicalism and Infidelity, seem to go together among French politicians. Strange as this may seem to us, it is the natural consequence of that inability which seems to exist in Catholic countries to separate matters of religious faith from questions social or political—the fostering of which undoubtedly has kept up the power of the Catholic church as a political force. Once enable men, generally, to dissociate their political from their religious views, and the power of the Church in temporal matters is at an end. The newspapers speak of the outpouring of the people at Ledru-

Rollin's funeral as an imposing Radical demonstration ; but nothing seems to have come of it, not even a street fight, as far as we can learn. By the cable we learn that a crisis exists in the French cabinet. The Assembly, by a vote of 420 to 250, defeated the motion made on behalf of the ministry to take up the Constitutional bills after the Army bill, and give priority to that which relates to the forming of a second chamber, and decided to consider first the bill for the organization of the President's powers. Upon this the cabinet resigned ; but we are informed that Marshal MacMahon, tired of the delays which the Assembly constantly interposes, will probably dissolve that body and form a ministry to suit himself. In any other country, or under any form of constitutional government, the Assembly would long ago have ceased to exist ; and this threatened action of the Marshal will make him, for a time at least, the most popular man in France.

COUNT VON ARNIM'S sentence is generally looked upon as a virtual acquittal, the offense of which he has been convicted having been stripped of its criminal features. He has appealed to the higher authority, as has also the government prosecutor. The Germans are just now commenting favorably upon the frankness of Bismarck in publishing the secret dispatches, the custody of which formed part of his controversy with von Arnim. They are delighted with an act which takes the whole country into the confidence of the Chancellor, and shows them at the same time an attractive feature in his character. Nor are they displeased to find his views to have been and to be those of the majority of his countrymen, and that he sees as they do, in the growing strength of France, a menace to Germany. The French have, long ere this, transferred to Germany the sentiments which they entertained, a generation or two ago, towards "perfid Albion," and the publication of these letters of the German Chancellor has stirred their resentment to the depths. Their sympathies, too, are excited against him by his treatment of the Ultramontanes, with whom he is now at close quarters, and that pitcher so often broken and so often badly mended, which men call the Peace of Europe, will on the first occasion go once again to the well, if French hands are let alone and allowed to finger it. Bishop Martin, the ecclesiastic who was fined for contumacy, and whose friends paid his fine in

spite of him, has been tried by a tribunal and deposed from his see. "Another rebel rightly served," cry all the Protestants and Government friends. "Another brand thrown into that fire which is soon to envelope Europe," answer the Catholics and the Papal party. And so the fight goes on.

THE Managers of the Centennial Exhibition, and all those who have taken an interest in the event which is to celebrate the anniversary of our Independence eighteen months hence, have been very much gratified by the recently announced acceptance by Great Britain of our thrice proposed invitation. "Come and see me," the modest young person, called America, has said to her venerable mamma, "and bring along your things. Come and dine with me on the anniversary of the day when I ran away from you because you behaved so badly and treated me with such unkindness. I don't bear you any special ill-will, now that we are both older and I can thrash you if necessary; so come and dine, and I'll show you what a remarkable individual I am, and how I've prospered since I left your apron strings. But be sure and bring along your mutton and your beef and bread and butter, and plenty of money with which to pay for your dinner, and, by all means, your knife and fork and spoon. I haven't money enough about me, just now, to pay for all these things, but I'll order the dinner and have a place ready for you at the table." It was, perhaps, not unnatural that an invitation of this nature had to be more than once repeated before the acceptance came. Mr. Sumner indeed maintained that Great Britain would not and could not take part in a celebration of the events of the Revolution, but he seems to have mistaken English feelings, as he did more than once, and to have underestimated the change which a hundred years have made in the sentiments of the British people. There are few to be found in England to-day who do not think the events of 1776 worth celebrating. The interest which the Government is about to take and the appointment of a Commission are due, doubtless, to Colonel Forney's efforts more than to those of any other man. For five months he has been in London, with the object in view of awakening in Englishmen and in the Government of that country an interest in the Centennial; and if tact and genial manners, and

a knowledge of men and things, together with an enthusiasm natural and strong, united in one man, can avail in such matters, they have done much in this to secure for the Centennial what its promoters most desired to have, the recognition and acceptance of Great Britain.

WE have had a live monarch among us. A real King, attended by his minions, has crossed the threshold of the White House and stood unabashed in the Capitol before the representatives of the people. The newspapers have kept us very well informed of the movements of his majesty king Kalakaua, from the moment he set his foot upon the soil of this country up to the present, when he is passing through the trials of New England hospitality. His coming is thought by those individuals who are always much better informed than their neighbors, to have reference to annexation; and General Grant is reported by these persons to have rolled his eagle eye westward from San Domingo until it rested hungrily on Hawaii; but the general belief is, that His Majesty is here on a tour of pleasure to which is tacked an application for a loan. We have seen so many strange things in our day, that the visit of this Potentate seems quite a matter of course. No one is at all surprised, apparently, that this monarch of the Cannibals should be at large in this peaceful country, without devouring any of his hosts, and not even the spectacle of the King of the Sandwich Islands sitting (oddly enough) by the side of Dr. Bacon at a banquet in New Haven, has occasioned comment, although the successor of the Kamehamehas talked with the old Puritan divine in a style rather unlike that which would have been indulged in a century ago, and the spectacle must have been on the whole remarkable, and have contributed much to the edification of the company.

AFTER a long life spent in philanthropy, Gerritt Smith has died. The inheritor of large wealth, which he spent for others, in the whole course of his career there was no act which, dying, he could wish forgotten. An abolitionist, practical, earnest and sincere, he passed unscathed through all the trials which his principles cost him, to see, like Garrison, the nation that had cursed him changed to do him honor. He was a man of generous feelings

and unusual breadth. During all the anti-slavery conflict he made no war upon the Constitution, and unlike so many others of his school, never carried his hatred of slavery to the length of hatred of the slave-owners. The war over and emancipation won, he was anxious for reconciliation and peace, and joined Horace Greeley in going bail for Jefferson Davis. A fair man, too, and large minded, it must have seemed strange to him when, in 1872, the Republican Convention, met at Philadelphia, which had spent the better part of two days in ridiculing his old friend, above all for that act, rose up *en masse*, and cheered lustily for ten minutes at the presence of a man whose name is next to Greeley's on that bond. It was a scene worthy of the Agora, and no one in that shouting multitude knew better the true value of those cheers than the tall old man who stood up that day so calmly in the midst of them.

THE gods seem bent on the destruction of the Republican Party. And through a tenderness, perhaps, for so much of its past that is great and glorious, they have placed the weapons for its destruction in its own hands. It is not easy, before the appearance of the report of the Congressional Committee, to get at the true state of things in Louisiana. We have on the one hand despatches from the Associated Press, from various commercial bodies, the clergy of the State of all denominations and the Conservative leaders; and, on the other, the despatches of the Radicals, the statements of Governor Kellogg and the telegrams of Lieutenant-General Sheridan. There is undoubtedly a conflict of veracity, and one or the other side is liable to the charge, as it has been delicately put, of "saying things strangely at variance with the truth." The opinions of most Americans, too, in matters of the kind, are apt to be colored by political prejudices—and prejudice of one sort or another is a thing which few of us are without. It must be hoped that the American people will look at the events of the past few days or weeks with a prejudice in favor of civil liberty and free institutions, and with as much determination to maintain them as their ancestors showed a century ago. From various sources, public and private, a true statement of the case seems to be about as follows: The election in November was carried by the Conservatives by a majority sufficient to give them complete

control of the Legislature. Upon this, the Returning Board, a body which has so often appeared disastrously on the stage of Southern politics, set to work to undo this result as far as was possible. That there was fraud and intimidation by both sides is probably true; that the Board made use of all charges of either to lessen the Conservative majority seems to be undoubted. From the number of seventy, as first reported, it reduced the Conservative members to less than fifty, in some cases throwing out thousands of votes on one affidavit that intimidation had been used, until the control of the House had been placed beyond peradventure in the hands of the Radicals. On the 4th of January the Legislature met. A law of 1872 provides that the Returning Board shall present its returns to the Secretary of State, from whom the clerk of the outgoing House shall procure a list of members declared elected, and from that list call the roll before they are sworn in. Once in office, the regularly returned members are to pass upon the admission of those whose seats are contested. The Conservatives seem to have had a majority of the members present on the assembling of the House, when, without waiting for the clerk of the last House or permitting him to discharge his duty, they elected a temporary chairman, were sworn into office, made the temporary chairman permanent Speaker, and admitted as members four men who were declared not elected by the Returning Board. Thus far their irregular proceedings had put them in the wrong, and the Radicals had the right of it; and just here comes the most unfortunate feature of the whole affair, one which it is safe to say would have been deemed impossible in this country a few years ago. Upon the request of the Radical members, the troops of the United States were marched into the legislative hall, and the four newly-seated members ejected beyond the bar by force. The Conservatives at once withdrew in a body, after making a protest, and the Radicals thereupon, though less than a quorum, constituted themselves the House and elected a Speaker, after which they proceeded to admit members of their own party to fill the vacancies of contested seats; none of whom, it may be remarked, the United States troops found it their duty to put out. There can be but one opinion of this transaction. The Constitution of the United States provides clearly a method for the interference by

the General Government in the affairs of a State. It is based upon certain conditions, none of which were fulfilled in this case ; and the use of the forces of the Government cannot be justified by precedent, the law, or the necessity of the case. There was no necessity for their interference, for there was no mob nor riot nor any fear of such ; and there is no precedent for such a course in the history of America, at least North of the Isthmus or the Rio Grande. The presence of troops in the State House was an insult, and the use of them an injury almost irreparable. The Conservatives have acted since Monday with great judgment and forbearance. They seem to see the terrible consequences to civil liberty and to themselves, should any act of theirs of resistance or rebellion draw down upon them the hand of the General Government, or justify in the eyes of the majority of the North, who are now their friends and sympathizers, any further exercise of unusual powers. Rebellion they know must be put down, and rebellion they will not attempt. With a patience that is certainly extraordinary, they have submitted their case to the people, solemnly protesting in the name of civil liberty against an act which they rightly hold to be an attack, not only against them, but against all the people of this country. Their position is made peculiarly trying by the fact that the President has intrusted them to the care of such a man as General Sheridan has proved himself to be. The same newspapers that contain the statement of Congressman Phelps, that the investigations in New Orleans of his Committee have demonstrated the folly and weakness of the charges against the White League, having shown that it is neither a political nor a secret body (its constitution being public, and its officers men of character and position who have property at stake) and its object the preservation of peace, print almost side by side with it a letter of General Sheridan, which it is safe to predict will be the most remarkable production, literary or political, of that officer's lifetime. After a stay of a few hours in New Orleans and a chat with a few radical leaders, General Sheridan declares the white inhabitants of Louisiana to be murderers and outlaws, and recommends that the leaders of the White League be pronounced "banditti" by proclamation of the President and left to the tender mercies of his (the Lieutenant-General's) sword. What he will do with them he does not conde-

scend to mention, but his allusion to the "murders of the 14th of September" and the Vicksburg troubles, makes it evident that he is in one sense, if not in all, in sober earnest. Hardly has this famous dispatch reached Washington to awaken in the breast of the President the admiration of a congenial spirit, when there comes another. A plot of the aforesaid "banditti" to assassinate the General the night before—a foolish plot, nothing in it you know, of course, merely mentioned as a trifle. Going to kill him, because he told the truth—the naughty men. "I'm not afraid," the despatch assures the Secretary of War, "and will not be stopped from informing the government that there are localities in this department where the very air has been impregnated with assassination for some years." A case for chloralum and chlorate of lime, perhaps; but these are not the disinfectants which the gallant General is desirous of using. "Well let them come, hey, Sir Lucius, we-we-we won't run, Sir Lucius." No one expects Phil. Sheridan to be afraid; it is a pity that he himself has taught us as little to expect him to be statesmanlike and sensible. Of course these letters have called forth a hundred replies. The Chamber of Commerce, the Cotton Exchange, the Board of Underwriters, and other bodies, have pronounced their statements false, but the best answer to them all, perhaps, is found in a card signed by the Bishops of the Episcopal and Methodist churches, the Catholic Archbishop, the Jewish Rabbi, and other clergymen, declaring "these charges unmerited, unfounded and erroneous," and adding that they "can have no other effect than that of serving the interests of corrupt politicians, who are this moment making most extreme efforts to perpetuate their power over the State of Louisiana." Whether those politicians will accomplish this or not, lies in the power of self-restraint of the people of that State. Patience will have a perfect work in this, as in many another thing—an outbreak will destroy all. There is nothing to be hoped for from the President, for like that noble animal of which he is so fond, he smelleth the battle afar off, and the thunder of his captain, Sheridan, will undoubtedly call up an answering shout from him. The Secretary of War has sent an answer expressive of the full confidence and approval of the General's course. As this was sent in advance of any "course" or any action, except the inditing of these famous letters, it means that the administration will endorse

whatever Sheridan may do. A President who could get his party and the country into such a dilemma is not the man to get them out. From the warlike regions of the White House there will come no peace; if it is to be found at all, it must be sought in Congress. This is no question of a party nature. The whole basis on which the institutions of this government rest is threatened if such interference by the United States in the affairs of a State is to be permitted. Pennsylvania has quite as much at stake in this business as Louisiana. She has known often, and Philadelphia especially has more than once experienced such tampering with the votes of the people as resulted in the placing in office of men who had never been elected; but it can safely be asserted that her citizens would not have submitted with any better grace than have the Louisianians to such gross mismanagement of the public affairs as had led in New Orleans to disfranchisement and oppression, and a system of taxation equivalent to confiscation. It is not to be expected that General Grant will look at this matter as a constitutional lawyer or a statesman. His training and his character have made him neither. He saw in this resistance to his commands the spirit of a rebellion which he crushed by military force in time of war, and is incapable of going beyond the appearances of disregard of his authority, to inquire whether that authority has not itself disregarded the law. He has all along misunderstood the nature and powers of the office which he holds, and that is a thing for which the people of this country are as responsible as he. If anything could teach us the folly of entrusting to a purely military man the delicate duties of an office like the Presidency, it ought to be this experience of the last two years. What we need now is a statesman of broad views and large experience, of tact and firmness, and discretion. This is the golden opportunity, but whence is the man to come? Another such event as this, and the Republican party will surely have no chance to give such a statesman to the country. Whether he stands to-day among the Democrats cannot yet be seen. In just such a time as this, the leaders of a great party, as well organized as that which now controls the central government, strong in the insolence of office and arrogant with power, sought to inflict a great wrong upon a weak and defenseless State. A large proportion of the voters of to-day were voters then, and the people at least will remember the consequer-

ces of that attempt. Bleeding Kansas was the victim of the Democratic power, but the spirit she aroused became its destroyer: outraged Louisiana bids fair to do as much for the Republican.

THERE is now before Congress an act to create and organize an Army Mutual Survivorship Fund. This act was drafted with great care by General James B. Fry, one of the adjutant-generals of the army, and an officer of distinguished services. It has been approved and endorsed by the Secretary of War, and waits only for that Congressional action which is needed to make it a law. The example of other countries, Germany especially, serves to show how well such a provision has worked. It is plain that the government cannot provide adequately for the support of all the widows and orphans of its public servants. The existing pension laws, as liberal doubtless as the nation can afford, come far short of the actual necessities of the case. The sad and painful spectacle is presented at every session of Congress, of pitiful appeals for increase of pensions from thirty to fifty or seventy-five dollars a month. Necessity presses the widows and orphans of officers of all grades, and just as imperious a necessity stays the hand of Congress in giving. Various remedies for the sad state of utter destitution after a lifetime spent in the service of the country, have been proposed, and life insurance and annuity companies have added to the heavy drain already imposed on our under-paid army officers, by an increased percentage for the risks he runs in obeying orders. The act now before Congress aims at enabling an officer, by a small deduction from his pay, to secure, from the date of his death, an income for his surviving widow and children. The aggregate of the deductions from his pay, is the price agreed upon for a specific guarantee of a stipulated income for the life of the nominee. As long as the guarantee is held, the price of it as agreed upon must be paid, and it must belong solely, and without reversionary claim of any sort, to the fund from which the annuities are to be paid. In this way the price of the guarantee is reduced to the minimum, and the fund is kept adequate to the demands upon it. The government will have a steadily increasing cash balance at its disposal, having only to provide by appropriation for the amount necessary to pay annuities falling due. The officers of the army will have absolute certainty that the

conditions under which they purchase annuities will be fully and exactly complied with; they can fix by the amount of their monthly deductions from their pay, exactly the same monthly income for the widows or other nominees; the proportional price paid for this income will be exactly fixed by the same nice mathematical calculation that has made life insurance so profitable to private companies—while all the enormous expense of commissions and agencies and other incidents of the business of the great insurance corporations, will be saved in a very simple way. The monthly collections will be made by the pay department of the army, and the monthly payments will be made through the same channel, so that the dealings from first to last will be with those who are known to one another, and are bound together by the ties of a common service. The society will be open to all officers on the same terms for all contingencies of service, thus saving the increased charge for increased risk, which practically makes it impossible for army officers to procure or keep up their life insurances in the ordinary companies. The project is one that seems to commend itself especially to the prompt and favorable action of Congress both for the sake of the country and the army.

SOME five or six years ago, a Western Free Trader writing in the *Evening Post* as to the general prostration and debility of things in Protectionist regions, asked after the reason of the decline and obscurity of the University of Pennsylvania. Some of us, even then, would have asked him to give some proof of the fact before he set us to account for it; and were he to visit West Philadelphia to-day and take his stand at Thirty-sixth and Locust streets, he might find some things more unquestionable as facts, that need to be accounted for. He would see such a set of collegiate buildings as are only rivaled on this Continent by the University of Toronto, which was erected by the Canadian Government. In the newly dedicated hospital and medical department, he might find proof that neither decline nor obscurity is the present condition or the inevitable fate of our oldest institution of liberal learning.

We are glad to chronicle a handsome addition to the endowment of the University. Mr. I. V. Williamson, who has given generously to many of our most deserving institutions, has con-

vayed to the University fourteen acres of land on Gray's Ferry Road, fronting 1400 feet on that street and 1200 feet on the east bank of the Schuylkill. It is worth at present about \$200,000, and half is given for the support of the University Hospital.

During the present academic year there have been changes in the working force of the Faculties of Arts and of Science. Prof. P. F. Frazer has resigned, to engage in the State Geological Survey, and is succeeded by Prof. S. P. Sadtler, a graduate of Göttingen *summâ cum laude*, and heretofore Professor at Gettysburg. Dr. Geo. A. Koenig is become assistant Professor of Chemistry in the Scientific Department. Mr. Richards, the architect of the collegiate building, and heretofore the instructor in architecture and drawing, is become Professor of that subject, which is made a separate technical department, coördinate with chemistry, geology or engineering. Prof. Thompson, heretofore assistant in Mathematics, is elected to the chair of Social Science. Col. Clark, formerly of West Point, becomes instructor in Mathematics. The number of students in attendance is greater than ever before.

THE first financial procedure of Congress has been the rejection of Judge Kelley's 3.65 bond bill in the House, which was expected by most people. If the present volume of the greenback currency is to remain in circulation, some such plan as this bill proposed is exceedingly necessary. The country has too much of this currency for ordinary, and too little for special occasions.

The Sherman bill to provide for the resumption of specie payments has been carried through both Houses of Congress after originating in the Senate, by the most unreserved exercise of party superiority. What the refusal to allow of the free expression of hostile opinion at so early a stage of the session implies, is not easy to say, unless it be the impatience of men goaded into doing something, but quite uncertain whether a free criticism of that something may not show it to be the wrong thing, and leave them "all at sea" again. The bill enacts for the resumption of specie payments at the end of four years. With this view it provides, (1) for free banking inside the National Banking System and under its guarantees; (2) for the withdrawal of Treasury Notes from circulation, as new bank notes are issued, till the volume of the former is reduced to \$300,000,000; (3) for

the substitution of silver coin for fractional currency, as speedily as may be, and by the purchase of silver through the sale of Government bonds, if need be.

We may get back to specie payments by 1879, but it will not be by virtue of anything that this bill provides for. National Bank Notes are better than Treasury Notes, provided there is anything but Treasury Notes to redeem them when they are returned to the bank, otherwise not. Last month we proposed to make Government bonds fill that place; there is certainly nothing else in the United States to do it. The bill ignores the one great difficulty of the case: we cannot resume because we have not the coin, and because our present policy—the policy of the Government, of the corporations and of the people, alike—tends to permanently reduce rather than to increase the amount of coin in the country.

The editor of a German financial paper, specially interested in the market for United States securities, writes a rather sensible letter on this subject, which everybody has seen. He has no notion of the Treasury being able to resume with empty vaults, and he points out the plain and easy way to fill them. He says, "Come to Europe, where your credit is now excellent, and borrow \$100,000,000. That will start you." And that is the only way of immediate resumption, such as he urges on the country. To get that sum without borrowing it is the only way of wise and permanent resumption.

As to the details of the bill, we take exception to—(1) the resolution to keep the Treasury notes in circulation to the amount of three hundred millions, whereas, as we said last month, it would be better to be rid of them altogether, unless their volume can be made thoroughly elastic. (2) The proposal to substitute silver for fractional currency, an expensive and inconvenient form of money for a cheap and convenient one. That the existence of these petty notes in any way affects the general question, we do not believe; and we suspect that the notion of getting rid of them is a mere tradition of the Treasury inherited from Secretary Robeson. (3) The removal of the charge for coining gold at the United States mints, a measure which will work both ways. It will make the conversion of United States coin into bullion far more common, because its reconversion into coin will cost nothing.

But the worst feature of the bill, and the one that most clearly

indicates that it originated with the Executive and the Treasury, is its leaving the whole mass of Treasury notes, after their withdrawal from circulation, in the hands of the Secretary of the Treasury, with no limitation as to his power to dispose of them. They constitute a new "reserve," which a new Secretary Richardson may issue at his pleasure—wisely or unwisely—to the checking of panics and monetary stringencies, or to the ruin of half the business men of the country. We need financial certainty and freedom, but the bill gives neither. It sets up a dictatorship at Washington, and put under its control the welfare of the whole people.

THERE is an almost perfect peace in the camps of both political parties in Philadelphia; for the preparations which both are making for the February fight are noiseless. A general disposition to join in a sort of millennial lying down together is manifest;—the Union League consenting to meet the Democratic Association on the neutral ground of the Reform Club parlors. Whether it will continue may, perhaps, be doubted, but in the case of some of the animals at least, if not in all, it is not the result of over feeding, and considering the short rations on which the Democratic lion has so long lived, it is certainly very creditable. A bill to establish the new Magistrate's Courts has been accepted by the three above named bodies with the concurrence of the Law Association, and has probably by this time been sent to Harrisburg. It is a good bill in most respects, though its faults of omission are considerable. It is certainly to be regretted that the provision, requiring the new Magistrates to be learned in the law, has been omitted. Of course such an omission by these bodies is fatal; for, difficult as it would be, in any case, to secure so desirable a provision from the Legislature, this agreement of the four parties which have drawn this bill makes it impossible. The Reform Club has yielded an approval of the bill, adding to it, however, an appeal to the Legislature to engraft upon it the feature so earnestly desired; but no one is sanguine enough to expect a favorable result. The election of February will be very important, but what election is not nowadays? United action by the honest men of both parties ought to win success, and perhaps will do so; the first step is the most difficult of course.

NATIONAL EDUCATION, I.

IN a paper from the pen of one of our most estimable fellow townsmen, prepared for our Social Science Association and reproduced in the pages of this MONTHLY, the old question of the efficacy of education in the promotion of morality and the prevention of crime is once more raised, and the popular view of the subject is called in question. Mr. Chandler speaks from many years' experience as a student of the effects of prison discipline, and of the statistics of the criminal class, and he expresses his conviction—as based upon that experience—that while education modifies the character of crime, it does little or nothing to prevent it, and that only the power of conscience, not that of intellect, will keep men virtuous and upright. In explanation of his view, he says: "While in the lowest order of crimes I may have found more unlettered than lettered criminals, I have found the former more amenable to gentle moral dealing than the latter were."

It is with no wish to call into question Mr. Chandler's authority as an observer and recorder of the facts observable on this very painful topic, that we would raise the issue as to the correctness of his views based upon those facts. The former is unimpeachable; but as he has not only given us his opinion, but the data on which it rests, we are in a position to ask whether his inferences are necessary, or may be mistaken.

Just as little do we wish to come forward in defense of the popular notion of the subject, that he justly impugns. One need not have waited and watched fourteen years, in self-sacrificing patience, at the doors of our great prisons, to know that the educated equally with the uneducated become amenable to the severity of just laws—that the development of the intellect does not necessarily involve an equal growth of the corrective and restraining power of the conscience, and that some of the guiltiest and basest sinners against the laws of God and of man are to be found among those who had every social advantage and every light that education could bestow.

But we would maintain the much more moderate thesis, that the effect of education in general, even of an elementary kind,

is not only to change the character of the crimes committed against society, but to diminish the amount of crime; and further, that our existing system of public education admits of and demands changes that will render it much more efficacious in this direction.

In saying so much we do not contradict any of the valuable and interesting statements of his own experience that Mr. Chandler has given us. Mr. Chandler has not made the study of different societies of different degrees of intelligence, nor even of the same society in widely different stages of intelligence. He has chiefly marked the effects of education in our city in 1860-74, which hardly furnish the data for so large a conclusion as he draws from them. If he could compare Philadelphia with some Asiatic district of the same population, where—an impossible case—the administration of justice was vigorous enough to put on record and bring to punishment as large a proportion of crime as with us, the comparison would furnish a fair test of the influence of education. It is not enough to show that many educated persons are found among our criminals, unless it is also shown that the aggregate of criminality is not diminished. For the practical purpose that he had in view—the warning against an undue reliance upon mere education, against exaggerated estimates of its power—those facts do indeed furnish sufficient ground.

Even in the facts which Mr. Chandler alleges, there is evidence against his main position. He found that the educated criminals were the hardest to reach by any moral suasion—were the most hardened in iniquity. But what is the reason? Surely that their fall from integrity was the greatest; they strove against more light; they overcame more obstacles to their wicked purpose than any others. And therefore their acts reacted upon their character with a more tremendous force, and plunged them to a lower moral depth, than did the crimes of the ignorant and the uneducated.

It may, indeed, be urged, and with great truth, that those who are acquainted with the criminal classes are aware of cases in which a large measure of mental culture seems to be accompanied by an utter want of the moral sense; and, from these extreme cases, it may be inferred that education itself is no fosterer of the

moral life. But, surely, some forms and sorts of education, and not education in general, are to blame for such results as this. All experience shows that the intellect may be cultivated more than the conscience, and *apparently* to the stunting of conscience. But it is equally certain that a vigorous conscience, in the absence of intellectual light and vigor, is a prolific source of crimes. All the past of the world's history abounds in illustrations of the cowardice, the baseness, the cruelty of the unenlightened, and therefore easily terrified consciences of ignorant men. Conscience is the inward light; but "if the light that is in thee be darkness," what then? It is the Divine voice in a man's heart; but if it be only heard, not understood, of what terrible misinterpretations may not the man be guilty? The religious history of the world tells us.

A very thoughtful English writer, Mr. Henry Holbeach, sums up the two sides of the case in this way:

"Those in whom there is more conscience than intelligence are apt to commit errors of conduct which infringe general principles involving the absolute rights of the race (although they may not contradict the received morality); while those in whom intelligence is stronger than conscience, are most apt to commit sins against individuals of which it is difficult to prove the abstract wrongness (although they may contradict the received morality), and also to commit sins of omission."

To come down from general principles to details, we see that education greatly diminishes the number and mitigates the atrocity of crimes of violence especially. Partly it does this by creating a public opinion which ordinarily very strongly condemns such acts and inflicts the heaviest censure upon their perpetrators. It brings within the range of that opinion those who, but for the little learning that they have, would never understand it. But more than this, it prevents a multitude of such crimes simply by endowing the common people with a better and more adequate means of expressing their views and feelings to each other, and thus it prevents quarrelling. "It is silent anger which strikes the heaviest blow. It is free communication which clears the bosom of its perilous stuff, and keeps up a kindly intelligence between human beings. It is the child, which has not yet learned to talk, that strikes blindly at the table, or its nurse, when offended; and

a close observer of the heart-burnings among the ignorant will often notice that they are born of imperfect intelligence of each other in dilemmas of conscience or of affection, upon which such poor means of utterance as they have are thrown away. When the ignorant quarrel, they have no resource but the use of intensives, profanities, and indecencies, which clear up nothing, and only add fuel to the fire. So whatever enlarges their vocabulary, teaches them more of the use of speech, and facilitates their means of communication, is a real blessing, and must tend to prevent crimes of violence among them; for where strong feeling is painful, and does not find adequate speech, it is apt to pass off in violence. Now, a man who has learned to read and write is better able to find adequate speech for his painful feelings than one who has not; and he will find in even a little freedom of expression a culture unfavorable to the undue employment of physical force."¹

But this is not the only way in which any sort of education tends to diminish crime. The school is a place of discipline, as well as of instruction. Children are brought together under certain regulations as to cleanliness, mutual courtesy, good order and self-restraint which cannot but react upon the character. Many of them have the greatest need of such lessons. They come from disorderly and sordid homes, where the training and discipline that they should have received are conspicuous by their absence. If they are to pass directly into the active world, with no other lessons than those that they have received at the fireside, they will be more likely to become self-willed, unruly, disorderly citizens, than if the intermediate discipline of a good school had first impressed upon them the elementary lessons of social order. If the teachers are equal to the task they are capable of rendering the greatest service to the State, apart from the direct value of the instruction they impart.

But while so much is true of almost any system of education, much more might be expected from a method of education thoroughly conformed to the needs of society and of the nation. The truth is, we have talked too much as if there were something

¹ *Tangled Talk, an Essayist's Holiday*; by Henry Holbeach (London, 1864); Pp. 5-6.

magical in the contact of a young mind with a series of text books and teachers—as if results that no human eye could discern in the means employed, might fairly be expected among the final effects of those means. But after all, education is itself only a means, a very flexible means, to an end; and the first step in it is to choose the end with careful reflection, and then adjust the means to that end with the same carefulness.

Now it cannot be too heartily admitted that our system of public education is yet in the formative stage. While we had schools and colleges from the very first of our colonial existence, the rise of public schools, and of the popular demand for them, occurred within the memory of the oldest members of the present generation. The idea came into the Middle States from New England, and met with no small opposition as a dangerous “Yankee notion.” The quantity of public education among us is more admirable, as yet, than the quality; and indeed, beyond the clear duty of teaching a few of the elementary branches of learning, every part of the system is open to question. It has grown up very largely by haphazard, without any thorough investigation of the principles of education, or of what should be the course of education that will fit men for the discharge of their duties as good citizens and active members of society.

It has been especially defective in aiming but slightly at the formation of character. We speak from personal experience of two of the best public schools and some of their best teachers in this city. While we have a vivid recollection of the text-books used and the course of study required, we cannot recall a single lesson in any text-book that was directly intended to enforce upon the pupil's mind the infinite worth of moral principle, as outweighing wealth, mental gifts, smartness and all things else. We do not say that we received no such lessons, but they were chiefly derived from personal intercourse with a Christian gentleman—then principal of a school, and now a member of the Board of Control. But the very text-books of national history and the like, that might have enforced such truths without going out of the way, were written in an entirely different spirit and utterly missed the opportunity. What was imparted by the text-books was a mass of “information;” some of it well enough worth knowing, much of it mere dead lumber, that it took years to dis-

burden the memory of. Great changes in our public school system have been effected since then, and many of them we believe for the better. But they chiefly concern the quality and amount of the "information" to be dispensed, without in any way affecting the ideal of the system.

That state or national education is to be the American system so far as the lower schools and great mass of the people are concerned, is hardly to be disputed. Whatever may be said for or against state education, it is for us a fixed fact, in spite of all the opposition that is made by sundry minorities. Now if the state is to control and direct education, we need be at no loss as to what should be the aim of the education. It must be such as fits the man to take his place as an active and sufficient member of the state or the nation

What is the nation? Upon the answer depends the character of the education that should be given in public schools. In the lowest and the most imperfect conception, the nation is a necessary evil, which exists to keep the universal selfishness of mankind from acting in directions that would produce the mutual destruction of its members; *i. e.*, from acting like the Kilkenny cats. It exists, therefore, that men may quietly indulge their selfishness in more peaceful directions, especially that they may make money plentifully and keep it safely. To that end it has the right to tax the people in a very small percentage of their wealth, that it may thus insure the rest to them.

Such a conception as this is not possible to a people who made and still remember the sacrifices of 1861-65. If a nation be no more than this, then two hundred thousand men died a fool's death in those four years, and the burden of debt that we carry is the punishment of a stupendous folly. And if a nation be no more than this, then public education is an exceedingly questionable measure. It costs more than it fairly ought as a measure of insurance. Much of its activity is certainly not directed to the simple business of teaching children to keep their hands out of other people's pockets and tills, as a matter of selfish expediency. In this view, the House of Refuge and the House of Correction fairly eclipse the school-house, and deserve a large part of the admiration that has been foolishly wasted upon our schools.

The popular instinct, as evidenced by the actions of the people,

demands a larger and worthier conception of the State, its essence and its functions. Nothing less than the noblest can correspond to the enthusiasm, the self-sacrifices of the American people; and were we devoid of all other data, we might from the recent pages of our own history deduce the truest and the noblest of political philosophies.

The State, which in modern times finds its normal form or type in the nation, is a conscious moral organism—the organization of the whole people for the purposes of justice or righteousness. It is the institute of rights, as the family is the institute of the affections, and exists that the natural rights, which inhere in man's nature, may find a positive realization in man's history. It is not organized by any conscious act of reflection or volition on the part of its constituent parts; they no more willed to be members of a State, than to exist; and both results are to be traced to the same Cause. And the State, as a living, moral organism, is not a mere congeries of human beings, united by a compact or by accident; it is a moral personality, endowed with a life of its own—a life that is not the mere sum total of the individual lives of its citizens.

The State as the institute of rights has a two-fold vocation. The first is general, being common to all States, and is expressed by the idea of justice or righteousness. To promote justice, to make its citizens just men, to deter evil-doers by the penalties it inflicts for unrighteousness, and to enable its people to "do themselves justice"—to live the largest and noblest life, is the first work of the State. Its second or special calling is not capable of close definition, but each nation has its own part to play in the world's history—has some special quota to contribute to the treasure of humanity.—has some special task laid upon it by the Author of its existence. A nation that consciously confesses this twofold vocation and strives to fulfil it, is, in old Hebrew phrase, "in covenant with God."

A nation's life differs from that of the individual man, in this respect among others—that there is no necessary term to its existence. It can die only by suicide, for in its own nature it is immortal. And, indeed, a nation is not this generation or that, but the organic unity of all the generations that compose it. It is in some sense an earthly image of God's eternity, as that is not an

infinitely protracted time, of which only a single moment is possessed at once, but is "the whole and perfect possession of interminable life, which comprehends and embraces the whole at once." It includes the present, but not less the past and the future generations, binding each and all in the unity of the same distinct life.

The nation exists in a threefold form; it is at once the jural state, the culture state, and the industrial state. The first is most immediately connected with its function as the doer of righteousness, the institute of rights, but the other two are intimately associated. Every State has an intellectual life of its own, and an industrial life of its own; both are conditioned or modified by the national character; both react upon that character and modify it.

A national education, therefore, that shall correspond to the historical character of the nation, and to its idea, must be such as will call forth and strengthen in man that which fits him to be a good member of the nation in all the respects that we have specified. It must especially be such as will develop his mind, his character and his active capacities, in the direction that his own nation is developed as a culture state, a jural state and an industrial state. In considering each of these we shall, for obvious reasons, take them in this order:

1. Every nation is a culture state. The different national civilizations represent distinct stages in the progress of the human spirit, on its march from childish subjection to manly freedom of thought. The education, therefore, which is right and appropriate for one nation, is not the fitting method for another. What will do for Italy in the nineteenth century would not have done for Rome in the first. To open any literature of a past age and nation, or even of any distant people or nation, is to come into contact with a series of conceptions and forms of thought that are unfamiliar. We follow the train of reasoning in a book thus distant from us, without perhaps reaching the author's conclusion; we can weigh the force of all the reasons he gives us, but we cannot supply the arguments that he has passed over as too familiar, too generally accepted by his readers, to need to be stated. It may be said that to us, indeed, all the past is intelligible; it differs from our present only in the greater simplicity of its life and ideas; for we stand in the vanguard of the world's civilization,

and we have in our possession all the fruits of which the past contained but the germ. But, on the other hand, those germs have borne very different fruit, according to the character of the soils into which they fell, and other nations, at least as advanced in their culture as we are, differ very widely from us as to the character of that culture. Their forms of thought, their intellectual drift, all that constitutes what is special and peculiar in their national vocation, are at once an interesting and instructive study to the man who comprehends their significance, and a source of suspicion and distrust to the short-sighted who fear an invasion of foreign ideas. The difference of national languages reflects, if it also exaggerates, these distinctive peculiarities. But even between two nations speaking what is substantially the same language—such as the English and the American—the underlying and subtle, but real distinction of different culture continually makes itself felt, and may, in the course of a few centuries, in spite of literary interchanges, produce two distinct national languages, neither of them fully representing the present English tongue, but each of them representing deflections from it in directions governed by the national spirit. Up to the present date, the amount of literary interchange has been so great, and the conservative influence of schools and literary models has been so strong, that we still speak the Queen's English—but with a difference, as would be seen if the conversation of a group even of finely educated persons in London and in Philadelphia were put on record and analyzed. Even with identity of vocabulary, there is a large element of diversity in the choice of words, the frequency of their use, the construction of phrases, etc.

There is, therefore, a national, as well as a universal, element in every nation's culture; and national education must be in accordance with the fact. The study of the national language, and of literary models that are at once classical and national, will furnish the means of that study. But such a study will not be thoroughly intelligent unless it be historical. The finest sense of what the language is will be developed by contrasting its present with its earlier stages. Now English literature, from *Beowulf* down to Milton, represents our language in its earlier historical stages. England has not a whit more claim to it than ourselves. The literature since the Restoration is, on the whole, distinctively

un-American ; that which precedes it has no characteristics that sunder it from our sympathies.

In that great store-house of literary treasures are an abundance of the very finest material for literary and linguistic instruction in our schools. Here are books that might well be made our life-long friends, were their study to be pursued under competent teachers, who could carry us back from the book to the man, and make us to see the wisdom and the nobleness of the life that is embalmed in the book. And in such a study, no vague generalities would occupy the student, but the very closest attention to words, their living force, their varying history. The secrets of life lie hid in words, and blessed is the teacher that can lead us to comprehend something of the wonder of these marvels of everyday use. To divest us of vulgar wonder at the unusual—to make us wonder at the usual, the open secrets of life—not to make us master of the manifold instruments of intellectual labor, but to enlighten us with the illumination which flashes out of unexpected places upon the thoughtful man, schooled or unschooled—this is the crown of true culture.

Our present common school apparatus for linguistic training is curiously and ingeniously constructed to make the study as lifeless and mechanical as may be. That old torture, the school dictionary, is indeed gone. The present generation is privileged to learn something of their own language without weeping over the pages of *Entick*. But the spelling-book, the definer, and the etymology have taken its place, each a dreary *hortus siccus* of sapless and murdered words—each a funnel to pour immense verbal information into the youthful mind, without, in the least, awakening that mind to mental life and activity. Each is a mere collection of facts reached by linguistic students, but does not teach the students any method of linguistic study and observation for themselves. The success of the student who has mastered such a book can only puff him up with with false knowledge. He has learnt, not words in their living force and their actual use, but only definitions—those vraisemblances of things, which in spite of all Bacon's labors, men will persist in substituting for things.

Alongside these books generally stands an English grammar, modeled after some of the worse specimens of Latin grammars. A graduate of the University that numbers Lindley Murray among

her *alumni*, ought perhaps to deal tenderly with this class of books. Their chief fault is their attempt to treat a living language by the severely analytic method that is only possible with a dead one. They are guilty of linguistic vivisection. The student of their wearisome pages will go on talking bad grammar all his life, if he have no better or more practical instruction than they give—if he be not instructed by the example of persons who speak English correctly, or by the study of English literature.

The one redeeming book of the series is the reading book, out of which the student really learns all that he really knows of the words and the grammar of the language. Its usefulness goes so far as to cover up the failure of the other books associated with it. But it falls far short of what is needed. Its brief and unsatisfactory extracts serve almost none of the purposes that a text book for literary study should serve. They are not long enough to give a satisfactory view of the literary capacity and method, of the mental life and vigor of any one writer. They are not stepping stones to that "friendship of books," which should be a chief end in the study of books. Their fragmentary character prevents the student from comprehending the nature and unity of a work of art, and entering into its highest beauty; they are—some one says—like noses, chins and ears struck from great statues, and presented in that form to those who are to be impressed with the beauty of sculpture. And, lastly, as they spread over four or five centuries, and give a comparatively small space to each period, they offer no means for the study of the language in any one stage. Most of them, indeed, give the smallest space to the ante-Restoration period—that which is our especial and equal possession in the literature of England.

We have said nothing as yet, and on the principles which we have been following, we have comparatively little to say, of *the physical sciences* as a means of education. That they form a very valuable and important means of culture to the actual investigator, we do not need the evidence of the results to inform us. It could not be otherwise. The interpretation of the facts of nature, the accounting for those facts by tracing them back to causes as yet unknown, the discerning a physical order in the universe, is a work that calls for and develops great mental qualities in the true scientist. It gives lessons of caution, humility and

patience, as well as of keenness of observation and consecutive reasoning. Its discipline, could it be extended to all classes of students, would be of priceless value.

But the mistake continually made in the teaching of language is far more easily made here,—is indeed almost unavoidable in our public schools. We mean that the student is likely to have the result of other men's studies poured into him as with a funnel, as a mass of scientific "information," without learning anything of their method, or of the discipline that they obtained in the pursuit of that method. What is in them the most real and valuable knowledge, becomes in him a mere phantasm of knowledge—a heap of definitions and statements about facts, with which he has no practical acquaintance. How far the illustration by specimens and experiment—were that possible in our public schools—might go to make these things real, is hard to say. We certainly know of cases in which the results were far from satisfactory—of a student of at least average intelligence who did not know sulphur by sight, after a course of chemical study by text-book and experiment.

On the other hand, a large measure of the scientific discipline is attainable in the study of language, especially where the riper students are thrown to a great extent upon their own resources, by the want of too good an apparatus. Here especially the judgment or understanding, the faculty that distinguishes between two probabilities in favor of the more probable, is called into exercise. It is but one step further to the social tact that enables a man to move freely and with adaptability among his fellow men, and that, when combined with charity and courtesy, enables us to contribute very greatly to the happiness of others. Books will not teach that; the mere bookman may be a morose pedant utterly devoid of it; but the study of letters, when made the means to the knowledge of men, is the finest introduction to it. The courtesies of society have been carried to the highest perfection in those countries where linguistic studies were the basis of education.

One branch of physical science is taught, and taught very largely in our schools. The class that can just read has a "primary" geography put into its hand, and this small quarto, with its red and green maps and cheap wood cuts, is the first step in an ascending series in which "secondary," "intermediate," "school,"

“physical,” and we know not how many others, are higher steps. The first notion seems to have been that geography was a branch about which everybody ought to know something; then came the natural inference that what was worth doing at all was worth doing well—and the limit to the thoroughness has been fixed by the competition of publishers and book-makers, rather than by any just appreciation of the value of the study. “We must draw the line somewhere, you know;” but why it has been drawn short of McCulloch’s Geographical Dictionary or the last edition of Ritter or Malte Brun,—with the aid of Johnston’s Imperial Atlas or the large Atlases of Kiepert and Spruner—would puzzle anybody to say on purely educational grounds, and apart from the question of expense.

There is a limited amount of mental discipline afforded by the astronomical conceptions with which the geographies are introduced. It is worth while to know that the earth holds a place in the universe very different from what our sense perceptions would lead us to suppose; and it is likely that students, or at any rate the more thoughtful among them, do gather as much from the terms in which those facts are stated. But by far the greatest part of what is taught under this head in our schools is the merest phantasm of knowledge—is rather a deterrent from any farther seeking than a help and an impulse to it. And the time spent in memorizing the contents of books and maps, in every section and class of our public schools, is for the most part sheer waste. The student has no more real knowledge, after he has completed the course, than when he began. The facts that he has learned, though correct enough in themselves, are lies by implication, in that they are put forward as a description of what they do not describe. They contain no discipline of the mind. They only burden the memory; and after spending years in learning every speck on a large school atlas, the scholar generally spends a few more in getting utterly rid of it, and in learning the wisdom of the only wise thing that Matthias said in his big book, *The Pursuits of Literature*, viz: “Dare to be ignorant of many things.” It is said that a gentleman who fell in with one of our school-boys offered him “a quarter,” if he would tell him the names of all the capitals in Europe. It was done, and quickly. “Now,” said the gentleman, “I will give you another quarter, if you will tell

me whether they are animals or vegetables." "Animals," was the ready and confident answer.

Our teaching of this subject has hitherto, it is said, illustrated the saying of the wise man that "a fool's eyes are in the ends of the earth." Without absolutely discarding the teaching of earth knowledge, we might profitably take much of the time devoted to it to teach the students neighborhood-knowledge. The knowledge which is capable of verification, which stimulates the observant faculties, which discloses to the mind the wonderful and admirable things of common life, will be much more likely to be the starting point of a life-long devotion to the pursuit of knowledge, than a mass of notions that connect themselves in no way with the child's actual life. The geology of his native district, its relation to the isothermal lines and other general geographical facts, its meteorology, above all its natural history of every sort, would be at once interesting and valuable to the young mind, to which life is not yet divested of wonder and surprises, but may speedily be so divested when it is puffed up with the vanity of an unreal know- ingness. Real knowledge, just because it brings with it the perception of its own limits—actual contact with facts, just because it is seen to be but the handling of the outermost fringe of fact— never breeds vanity and ostentation in the human mind. All real illumination, in things scientific as in things spiritual, will humble and subdue its recipient. And such a course of study as we here suggest will be at once of practical use to the student, and will so clearly indicate its own limits, as to check the vanity that so often characterizes those who have received but a smattering of a great number of the "ologies." It will be in the line of the providential purpose that ordinarily connects each life so closely and exclusively with some single spot of earth. It will give opportunities for getting some of the discipline as well as the results of science, by associating scientific knowledge with actual experience.

The *mathematical sciences* furnish a most valuable means of mental discipline, when taught scientifically; but, as taught in our public schools with a view to commercial practice, their value is very greatly diminished. They represent the universal element in culture, as distinguished from the national and the local, represented by language and the scientific training above proposed.

They are the discipline of that which is universal in man, his reason, the faculty that deals not with probabilities, but with certain and unquestionable truths. Of themselves, and when unaccompanied by linguistic study, they are rather dangerous than beneficial; the mere mathematician lives in a world of ascertained premises, and is likely to be the most unpractical of men when he has to deal with our actual world of uncertain premises. He has reason at the expense of judgment, and the higher quality is at a loss in the absence of the lower; "the head cannot say to the feet, 'I have no need of you.'" But mathematical discipline gives a man a sense of belonging to a world of fact and reality, whose truths depend upon no man's trowing, that is not imparted by any other merely intellectual pursuit.

What is with us the first branch of mathematics, the science of pure arithmetic, furnishes an excellent exercise for the analytical power. But as actually pursued, pure arithmetic is carried but a very short way, and then the student is required to apply his knowledge to supposed cases in commercial arithmetic. Years that might have been well employed in the practice of the mental analysis of numbers, in the study of roots, powers, series and logarithms, are really spent in memorizing and applying commercial rules, with which, as business men tell me, our counting-houses dispense utterly. Elaborate round-about ways of computing questions, which the business man solves by reference to a printed table, are taught *ad nauseam*, while the mental alertness in dealing with numbers generally, which would be of the first value in practical life, is but very slightly cultivated, and only upon the simpler problems. In fact the only hard and valuable piece of work in pure arithmetic that the student has to encounter is the multiplication table, which very absurdly stops at "twelve times twelve," but might, as the years went on, be very usefully carried on much farther—say four or five times as far.

On the other hand, the synthetical branches of mathematics, especially geometry, when taught at all, are very unnecessarily postponed to an advanced period. Geometry is the best introduction to Algebra, but is always taught after Algebra, thus reversing both the historical and the mental order of these studies.

How far the mathematical course should be carried, is hard to

say. For some it should, perhaps, stop at arithmetic and geometry; minds that are deficient in analytical power will find these two about as much as they can learn with relish, which is a large part of diligence, in the true sense of the latter word. Others might, when "commercial" rubbish is once cleared away, be carried as far as the calculus, even in our grammar schools, and this result as a first step to the higher technical training would be exceedingly valuable.

The relation of national education to the jural and the industrial state will occupy another paper.

ETCHING AND ETCHERS.

"The central idea of etching is the free expression of purely artistic thought."
—Hamerton.

TO no portion of his art treasures does the print collector refer with greater interest or more lively enthusiasm than the folios allotted to Etchings—*original* Etchings.

While entirely and thoroughly appreciating the importance of works by the master spirits of the burin, both as sources of pleasure and as teachers and refiners, yet such is the charm attending the examination and study of original designs, when transferred to the metal by the hands of men whose names are surrounded by the halo which genius can alone impart, that the eye never grows tired, nor does the mind become weary in contemplating them.

There is a freedom and ease so inseparable to the intelligent execution of the needle,—so different from the studied exactness of the graver,—the thoughts of the etcher seem so immediately carried out and expressed, and the aim of art to conceal art is so completely arrived at, that we are left to search for and enjoy the *idea*, without any feeling of handicraft, and become as it were thoroughly imbued with the spirit and intention of the work before us.

Etching, as a process for the ornamentation of metal surfaces, was practiced as early as the middle of the fourteenth century. As to who first employed it for the purpose of taking impressions,

authorities are in doubt, but to Albrecht Durer, of Nürnberg, we owe the first important works, not commensurate, however, in success with the results obtained by him with the graver. Of his pieces, of which he etched some nine, "The Virgin and Child" and a "St. Jerome," dated 1512, are considered the most satisfactory.

The practice may be described shortly as follows: A cleaned plate of polished copper is covered with a varnish protecting layer called "etching ground." To this the design is either transferred or drawn at once, or worked out on the ground with the aid of the etching point or needle. This point—a stout piece of steel wire, varying in thickness, inserted in a handle—removes the ground from the metal plate wherever it works or passes, thus exposing the plate to the action of an acid when poured over it, as it actually is in the next stage of the process. A low wall of wax having been built up along the margin of the plate, dilute nitrous acid is poured over the latter. This stage is called biting in. The acid coming into immediate contact with the copper, where the etching-needle has scraped away the ground as it traced out the design, eats away or corrodes out the metal more or less deeply, the stronger the acid and the longer time it is allowed to remain. Where the ground has not been removed by the needle, the acid cannot act upon the plate. Thus, where it has been taken away, the design remains bitten into the copper, and visible as soon as the remains of the acid and etching ground are cleared off. The plate is then inked, and an impression or proof obtained as from other engraved objects.

In addition to the action of the acid, the dry point—so termed from no acid following its use—is brought into requisition, producing more or less of what is known as burr. This burr, during the process of printing, gives off rich velvety gradations to the impression. The burr is, in fact, the ridge of the copper material thrown up by the dry point on the left edge of the furrow, as the instrument cuts its way through the metal, which, catching and retaining the ink in a peculiar manner, protects a certain margin of smooth copper against the operation of the printer's hands when wiping the plate. The ink remains on this smooth copper, but passes away from the burr with a delicate gradation, giving a peculiar softness to the line.

To the painters of the Italian school we are indebted for many beautiful and interesting specimens of the art. Parmigiano (the first Italian etcher), distinguished by his tasteful arrangement of subject, and spirit and animation of design; Annibale Carracci, for taste and correctness of drawing; Guido Reni, for beauty and freedom of style; Della Bella, for facility of execution and brilliancy of effect; Ribera, for knowledge of anatomy and careful finish of extremities; and Claude, the inimitable Claude, French by birth, Italian by art, in whose landscapes, according to a late writer, "the firmament is pure, the earth smiling, and the sea calm, radiant, hardly moving under the evening breeze."

But to see the process carried to its utmost extent, and exhibiting its greatest powers, we must turn to the Northern schools; and there, like a central light, shines forth the genius of a Rembrandt—the Prince of Etchers—"the Shakespeare of the art." Such was his command of all the means and appliances of the art—seemingly creating them at will—such was his truth and simplicity of composition, and wonderful effect of light and shade, that whether touching the most homely or translating the most spiritual subjects, he stands alone. Straining after no ideal, he represented things as he saw and felt them, and despite of his uncouth drawing and intense, often harsh, individuality, his works, with hardly an exception—and they number some 350 pieces—invite the closest study, and reveal at every turn fresher and greater qualities. Preëminent alike in landscape, portraiture, history and Scripture, his productions are common ground of admiration for all, and language seems to have been exhausted in expressing the enthusiasm and reverence in which they are held.

And why is this? From whence comes the charm which attracts alike the indifferent and enthalls the most cultivated? It is mind speaking to mind, heart to heart, soul to soul. It is this: that throughout all the works of Rembrandt there comes to meet us earnest truth, deep feeling, intense devotion. Careless of detail, careless of mechanical dexterity, the great loving heart of the artist appeals to us, his earnestness of purpose controls us, and his depth of devotion elevates us. Witness the impressive treatment of subject in "The Hundred Guilder Piece," Christ Healing the Sick. Here is no beauty of form, no elevation of feature, no grandeur of style, but *Christ* human, surrounded by humanity,

heals, not by the greatness of awe, not by the power of intellect, but by that abounding love and sympathy for the wretched and weary so strangely revealed by the few short strokes of the master hand. And by their faith were they saved!

And again, what delicacy, thoughtful delicacy, in the "Abraham sending away Hagar and Ishmael;" what dignity of command in "The raising of Lazarus," as we almost hear the words pronounced, "Lazarus, come forth!" how sublime in composition the "Ecce Homo," and how touching in expression "The Death of the Virgin."

In landscape how easy and simple! in portraiture how truthful and natural! "The Burgomaster Six" stands completely absorbed in his reading; Sylvius, the minister, calmly and thoughtfully expounds the Book of Life; Bonus, the physician, deliberates on the case of the patient he has just left, while his own mother sits the personification of revered age.

Other Dutch and Flemish painters have left us many cherished productions of the needle. Look at the vigor and energy of the Vandyck portraits, careless in execution, but spirited and delicate in touch; while the natural composition, dexterous management of chiar-oscuro and free needle of an Ostade render even the rudest boors interesting. In animal life, Paul Potter for the spirit and truthfulness of his designs, Berghem for elegance of feeling and clearness of atmosphere, and Karl du Jardin for delicacy of taste and manipulation, have never been equaled; while in landscape, what can be more agreeable than the distances and soft sunny atmospheres of a Both, and the exquisite foliage of a Warterloo. In the English school we have Turner—not a pure etcher—but of whose combination of mezzotint with etching, Hamerton, a practical writer, affirms that "on all technical points in the application of artistic judgment to method, his results are so sound and safe as to be beyond criticism," Wilkie with his two or three etchings of first-rate quality, Francis Seymour Haden, and Cruikshank, whose originality and wit are universally recognized.

The French school gives us the genius and wit of Callot; Boissieu, "the master of vulgar imitation;" Calame, full of truth and sentiment; Jacquemart, that most marvelous etcher of still life, and Charles Jacque, simple and pure in feeling; while Lalanne, knighted for his qualities as an etcher, Daubigny, Corot, Veyrassatt, Meis-

sonier and the talented young Spaniard Fortuny, stamp on the copper their well-known individual characteristics.

Of professional etchers, those who do not originate on the copper, but reproduce the works or translate the paintings of others, we have two shining lights—George Frederick Schmidt, of the last century, who etched a number of plates after Rembrandt's pictures, with much taste and excellence of execution, and Leopold Flameng, of our own day, who is *par excellence* THE professional etcher. Flameng's power of copying the etchings of Rembrandt is so exhaustive, that he seems to have at some time or other actually dissected that master's plates, and got at the very anatomy of the great etcher's mode of procedure. His copy of the famous "Hundred Guelder Piece" is in all respects a most marvelous imitation of the original. He has not only seized the spirit and intense feeling of the design, but almost given us the exact technic of the master. His last production, a translation of Rembrandt's renowned picture "The Night Watch," is, for faithful rendering and admirable execution, one of the finest examples of professional etching extant.

In conclusion, much of the interest imparted to the plate of the landscape engraver is due to the point and acid, this process often forming the entire groundwork or outline of the design. No other form of engraving can so truthfully render the characteristics of foliage, the flow of water, the moving cloud, and general texture; add to this the tasteful use of the graver for finishing and giving solidity to parts, and we have the perfect work of this branch of line engraving.

W. S. BAKER.

Nov. 16, 1874.

THE GERMAN PROTEST AGAINST SLAVERY IN 1688.

AN article, entitled "The First Anti-Slavery Protest," appeared in the July number of this monthly, and was copied and endorsed in the October issues of *The Friend*, in corroboration of which there was printed in the latter an article called "The First Germantown Friends." As both these articles are in substance criticisms of the opinions expressed in a book privately printed by

myself in January, 1874, I have been urged to answer them. An opportunity has been courteously afforded me by the manager of this periodical to be heard in defense of my views, and I ask that the same kindness may be extended by the editor of *The Friend*, and the following copied into its columns :

In the *Potts Memorial*, after devoting several pages to correcting what I considered an error that had crept into history, I remark :

“The writer has been actuated only by a desire to make known the truth, in which wish she is confident Friends themselves will be the first to unite with her ; for while that society cannot claim so early a record ‘against the traffic of men-body,’ as the German-English quaintly expresses it, yet this very protest may have been the seed which, more than half a century afterwards, blossomed into the rule forbidding members of Meeting to hold their fellow-beings in bondage.” p. 17.

I had hoped that this courteous sentence would disarm the hostility of the peaceable sect called Quakers, but I should have remembered the warlike array of that respectable body against the great English historian who had dared to print his belief that Penn was a man of like passions as other courtiers of the seventeenth century. After such a precedent, how could I hope to escape censure—a mere wanderer on the shore of history, preserving a few pebbles of local interest, gathered with care and labor, it is true, and offered without doubt of their accuracy.

In *The Friend* I am accused of being “led by prejudice or other motives.” May not prejudice be more appropriately attributed to those who will listen to no other side than their own? In denying “the accepted opinion of writers without close investigation of facts,” do not they take the opinions of others without searching for facts? which I have endeavored to do from original sources. That I have “attacked a well established point in the early history of our State, assigning her (my) supposition as reason for denying their authenticity,” I would ask where and by whom has this point of history been established? There is a fable of the Lion and the Painter, and it is well to remember that the early history of Pennsylvania has been written by Quakers. In fine, I am gravely informed that had I read the document as printed in *The Friend*, 1844, I could not have made such assertions.

It is a little singular that reading the protest in that very edition, without heeding the Quaker introduction, first raised doubts in my mind regarding its accepted paternity, and afterwards a wondering surprise that any one could question the fact that it was addressed *to* Friends, reminding them of their individual and corporate sin against Christianity and humanity. How unfair this critique upon my want of research is, may be proved by the fact that p. 395 of the *Potts Memorial* I refer the "curious reader" to the protest (which had been crowded out of my book) as already printed in three books easily accessible, and one of them *The Friend*. I had even endeavored to obtain the original for the purpose of giving a correct copy, and had applied to the widow of Nathan Kite,¹ for it; she stated her belief that it was accurately printed in *The Friend*, so that version I had taken for my own use. As many of the readers of this magazine may not have either of the above works at hand, and knowing that one of the greatest proofs of my "opinion" is the document itself, I give it here, only omitting the introduction by Nathan Kite, copied from the October number of *The Friend*, which is a careful reprint of the edition of 1844.

The original was accidentally found thirty years ago among the Records of Friends; apparently it had passed out of the knowledge of the Society.

From *The Friend*, 1st mo. 13th, 1844.

The paper from which this is taken is the original. At the foot of the address, John Hart, the clerk of the Monthly Meeting, has made his minute, and the paper having been then forwarded to the Quarterly Meeting, has received a few lines from Anthony Morris, the clerk of that body, to introduce it to the Yearly Meeting, to which it was then directed. N.

This is to the Monthly Meeting held at Richard Worrell's.

These are the reasons why we are against the traffic of men-body, as followeth. Is there any that would be done or handled at this manner? viz., to be sold or made a slave for all the time of his life? How fearful and faint-hearted are many on sea, when

¹In my diary, under date of Philadelphia, Tuesday, May 28th, 1872, "called on Mrs. Nathan Kite to ask if she had the original protest found by her husband among the Quaker records. She said she gave all his papers to the meeting, and advised me to inquire of the clerk of the meeting, to whom I applied, and he knew not where it was."

they see a strange vessel,—being afraid it should be a Turk, and they should be taken, and sold for slaves into Turkey. Now what is *this* better done, than Turks do? Yea, rather is it worse for them, which say they are Christians; for we hear that the most part of such negers are brought hither against their will and consent, and that many of them are stolen. Now, though they are black, we cannot conceive there is more liberty to have them slaves, as [than] it is to have other white ones. There is a saying, that we shall do to all men like as we will be done ourselves; making no difference of what generation, descent or color they are. And those who steal or robb men, and those who buy or purchase them, are they not all alike? Here is liberty of conscience, which is right and reasonable; here ought to be likewise liberty of the body, except of evil-doers, which is another case. But to bring men hither, or to rob and sell them against their will, we stand against. In Europe there are many oppressed for conscience sake; and here there are those oppressed which are of a black colour. And we who know that men must not commit adultery,—some do commit adultery *in* others, separating wives from their husbands and giving them to others; and some sell the children of these poor creatures to other men. Ah! do consider well this thing, you who do it, if you would be done at this manner? and if it is done according to Christianity? You surpass Holland and Germany in this thing. This makes an ill report in all those countries of Europe, where they hear of [it], that the Quakers do here handel men as they handel there the cattle. And for that reason some have no mind or inclination to come hither. And who shall maintain this your cause, or plead for it? Truly we cannot do so, except you shall inform us better hereof, viz., that Christians have liberty to practice these things. Pray, what thing in the world can be done worse towards us, than if men should rob or steal us away, and sell us for slaves to strange countries; separating husbands from their wives and children. Being now this is not done in the manner we would be done at [by] therefore we contradict, and are against this traffic of men-body. And we who profess that it is not lawful to steal, must, likewise, avoid to purchase such things as are stolen, but rather help to stop this robbing and stealing if possible. And such men ought to be delivered out of the hands of the robbers, and set free as in Europe.² Then is Pennsylvania to have a good report, instead it hath now a bad one for this sake in other countries. Especially whereas the Europeans are desirous to know in what manner the Quakers do rule in their province;—and most of them do look upon us with an envious eye. But if this is done well, what shall we say is done evil?

²Alluding probably to the abolition of the old feudal system.

If once these slaves (which they say are so wicked and stubborn men) should join themselves,—fight for their freedom,—and handel their masters and mistresses as they did handel them before; will these masters and mistresses take the sword at hand and war against these poor slaves, like, we are able to believe, some will not refuse to do; or have these negers not as much right to fight for their freedom, as you have to keep them slaves?

Now consider well this thing, if it is good or bad? And in case you find it to be good to handel these blacks at that manner, we desire and require you hereby lovingly, that you may inform us herein, which at this time never was done, viz., that Christians have such a liberty to do so. To the end we shall [may] be satisfied in this point, and satisfy likewise our good friends and acquaintances in our native country, to whom it is a terror, or fearful thing, that men should be handelled so in Pennsylvania.

This is from our meeting at Germantown, held y^e 18 of the 2 month, 1688, to be delivered to the Monthly Meeting at Richard Worrell's.

Garret henderich
derick up de graeff
Francis daniell Pastorius
Abraham jr. Den graef.

At our Monthly Meeting at Dublin, y^e 30—2 mo., 1688, we having inspected y^e matter, above mentioned, and considered of it, we find it so weighty that we think it not expedient for us to meddle with it here, but do rather commit it to y^e consideration of y^e Quarterly Meeting; y^e tenor of it being nearly related to y^e Truth.

On behalf of y^e Monthly Meeting,

Signed, P. Jo. Hart.

This, above mentioned, was read in our Quarterly Meeting at Philadelphia, the 4 of y^e 4th mo. '88, and was from thence recommended to the Yearly Meeting, and the above said Derick, and the other two^s mentioned therein, to present y^e above said meeting, it being a thing of too great a weight for this meeting to determine.

Signed by order of y^e Meeting.

ANTHONY MORRIS.

I am told that I have a "theory," a term given to an opinion unsupported by facts. Though applied in derision, I accept the term under protest, and before proceeding further will define my position, that the candid reader may judge whether this baseless fabric of a theory has been overthrown by unanswerable arguments leaving "little to be said" in my behalf; or whether unfair criti-

^sThere were three others signed it.

cism on garbled extracts cannot be met by undeniable facts. As my critics have seen fit to dispense with courtesy, I ask only a fair field and no favor, except, if it be possible, unprejudiced readers.

It is stated in the protest that slavery as practiced by the Quakers of Pennsylvania, "makes an ill report in all those countries of Europe, where they hear of it," and "for that reason some have no mind to come hither." We are told by these words that letters had come from the German company, and from old neighbors in the Fatherland, asking an explanation of the singular fact, that while all men were allowed liberty of conscience in Pennsylvania, black men were deprived of personal freedom. The subject had evidently been freely and fully discussed by the Germans, and I can see them gathering together after service in their "Kirchlein" and deciding how to inform their Quaker neighbors, in a loving Christian manner, of the great sin of which they were guilty. The protest drawn up by their revered head and ruler, Pastorius, is read to them, and is signed by Derick op den Graef, as the elder burgess; when the records of 1688 are examined, no doubt the name of Abraham his brother, and that of Gerhard Hendricks, will be found among those who held the offices of the two burgesses; perhaps the original document of the patent of Penn to Germantown, dated London, August 12, 1689, may contain these names, as Watson says it does that of Pastorius and Derick op den Graef, as two of the highest officers. This date is within a few months of the protest, if we consider the three or four months that must have elapsed between the time the persons were designated in this country to have their names filled into the patent in England, so that we know in 1688, the year of the protest, Germantown had a corporate existence. If it should appear that Gerhard Hendricks was one of the family of Ritter Hendrick, of Amsterdam, a distinguished partner of the German company, it would give additional force to my opinion that the protest was the expression of the feelings of the German colony against slavery, and as such signed by their rulers for the "commonalty." Had "our meeting at Germantown" been a Friends' meeting, the protest would have taken the form of a resolution, passed meeting, and been signed by the clerk, and as a matter of custom been carried up to monthly, quarterly, and yearly meeting, in due course of business.

“That Pastorius was not only a member, but one in full unity with his Friends, is clearly evinced by Philadelphia Quarterly Meeting appointing him and two other of the original signers of the Protest, representatives to the Yearly Meeting, to deliver it on their—the Quarterly Meeting’s—behalf.”—*The Friend*.

How the fact that Pastorius was in “full unity with Friends is clearly evinced” by the statement on the Protest, that “the above said Derick and the other *two* mentioned therein” are appointed to deliver it to the yearly meeting, I can not see. Pastorius’ name is not mentioned, and who is to tell us whether his or one of the other two is the one omitted; so little attention seemed to have been paid to it by the Quakers that they hardly noticed the number of men who signed it. They desired to strangle the poor little German bantling in its infancy and carelessly said: “Let its sponsors present it to the Yearly Meeting; we will have nothing to do with, it!” And so after a feeble existence of two or three months, tossed about from pillar to post, it was quietly buried and slept soundly in its grave for more than a century and a half.

“The Quakers,” says the July article, p. 496, “are no longer to plume themselves with feathers that belong to entirely different birds:” how they ever considered themselves entitled to wear this borrowed plumage, passes my knowledge! Like the jay in the fable, the time will come, if not now, when it will be plucked from them feather by feather; I assert that in claiming this protest as their own, the Quakers are shining in borrowed plumage. If formerly it was ignorance, it is now a willful perversion of facts, if they take a particle of the credit due to four Germans, not one of whom is proved to have been a Friend at that time. The glory belongs to the German colony, inasmuch as it dared, in its official capacity, to warn the prosperous English Quakers of the shameful spectacle they presented to European eyes in handling men like cattle, which even the feudal system of the middle ages in all its severity had not equaled.

I am told in the PENN MONTHLY, p. 497:

“If it could be established, for instance, that no Quaker meeting was organized in Germantown at that period, there would be some ground on which to argue: but unfortunately for Mrs.

James's theory, there is documentary evidence that such a meeting existed, at least one year before the adoption of the protest. The records of the Abington Meeting expressly state that in 1687 Quaker meetings were held in Germantown. The entry of the 31 of 1 mo. 1687 is this: 'Resolved to hold monthly meetings at the house of Richard Morrell, jr.,' at Dublin."

It is unfortunate for my reviewers that the protest is addressed to this meeting held at the house of Richard Worrell (three times is this word misprinted Morrell in the July article, the same sort of error that crept into my book, as *Tremulendos* for *Tremulanten*, to which attention is there directed). Is it possible that any one who has ever read the Protest of 1688 doubts the existence of this meeting? though many may not know that it is proved beyond a doubt by my critics that it was the *first meeting* established at Germantown, and it seems to me most fortunate for my "theory" that they acknowledge this; but I quote part of the above record on page 15 of the *Potts Memorial* to prove that the German meeting was not a Quaker meeting, the Germans having built a church and of course worshiped in it two years previous; for, if there is any force in language, "our meeting at Germantown" from which the Protest emanated, does not mean the meeting held at Richard Worrell's, to which it was "to be delivered." In the July article, p. 496, the "to" is omitted in the sentence, "This is *to* the monthly meeting held at Richard Worrell's," it is to be hoped through inadvertence; so that the writer really says, "This is the monthly meeting held at Richard Worrell's," which is calculated to mislead the reader, and in connection with the line of argument followed in the article regarding that as the first Quaker Meeting in Germantown, I fear that many of its readers would infer that the Protest emanated *from* that meeting instead of being addressed *to* it—just as the error has crept into history that it came *from* Quakers, instead of being addressed *to* them by *four* Germans, three of whom had lived four years among Quakers in Pennsylvania; of the fourth, Garret Hendricks, there is no evidence given that he belonged to a family persecuted in Germany for their adherence to the tenets of Fox, except that he came over in the same ship with Jacob Shoemaker in 1685. I am aware that a family of Hendricks in Germany were intimate with the founder of Quakerism there, for

Peter Hendricks⁴ is mentioned as acting as his interpreter in 1677.⁵

While not denying that Gerhard Hendricks *may* have belonged to the Quaker family, I will bring forward the following reasons for saying that it is a mooted point ; first, Hendricks is a very common German name ; secondly, two families bearing it were settled in Pennsylvania⁶ before Penn's arrival ; thirdly, Pastorius, in one of his letters, 1697, informing his father of the present survivors of the German Company in Frankfort-on-the-Main, Lubeck, Bremen, Magdeburg, one in each town, adds " especially my true and good friend Ritter Hendricks, living at the Keyzers Graft at Amsterdamb, will not fail to receive my good father's letters and forward them to me."

" Who shall decide when Doctors disagree ? "

Although the writer in *The Friend*, endorses wholesale the article of this magazine for July, surely he does not see that he proves what that denies, viz : my supposition that the first Quaker Meeting House was built on the land conveyed by Jacob Shoemaker.

" A new meeting house presupposes the existence of a previous one. *Mrs. James suggests that one might have been built on the three perches given by Jacob Schumacker, in 1693, for that purpose, but mention is made nowhere that such a house was really erected, while we know from Pastorius' own narrative, (Description of Pennsylvania, p. 34,) that a place of worship—though a very humble one—was built in 1686, a fact which should not have been questioned in the note on page 15 of the Potts Memorial.*"—*Penn Monthly* p. 498.

" In a deed dated 1st mo. 4, 1690, *Abraham Isaac op den Graef conveyed two lots to Jacob Schumacker—and in 1693 he conveyed them to Friends.* In the deed of conveyance, which is still extant,

⁴ See Fox's *Works*, in several large volumes.

⁵ Gerhard Heinricks had lots 8 and 9 on the east side of the Main street, about one-third of the way up, while the two opposite lots were held by the Frankfort Company.

The second third of the street is about lot 20, which, with the half lot next it, was also reserved by the Company on the east side, while Zurian Hartsfelder, who we do know was largely interested in the affairs of the Company, held the opposite lots. This would prove something in support of my supposition that Heinrick may have been of the family of Ritter Heinricks, if not actually the same person ; also the fact that his name does not appear among those who asked to be naturalized in 1691, nor is afterwards referred to, as far as I can learn, in the Germantown records.

⁶ See *Journal of Dankers & Sluyter*, 1679.

I find these words: 'Being fifty acres or a whole lot (three perches square, next to Jacob Isaacs Van Bebber only excepted, which the said Jacob Schumacker heretofore hath granted and conveyed unto the *Quakers, so called, for their meeting place*, and are always to be fenced by the owners thereof.)'

"This larger lot is still—a portion of it—held by the Germantown Preparative Meeting, and is the ground on which their present meeting house and school houses stand. The wording of the exception would show that the small lot was *then in the occupation of the Society, and if there was, as the deed evidently implies, a building on the lot*, the wording of the subscription paper in 1703, '*To build a new meeting house,*' will be readily explained. Most of the first houses were humble ones of logs, and a few years would bring the necessity for a more substantial structure. The size of the meeting house yard, where the building erected in 1705 stood, corresponds quite nearly with the lot mentioned by Jacob Schumacker in the deed quoted above.

"The house erected in 1705 was of stone, and if I am right in supposing it occupied the site of an older and more primitive structure, we have the twelve years preceding its building readily accounted for, and the supposition that Friends, for the *first seven, worshiped in private dwellings*, will cover the whole time."—*The Friend*, October.

That I ever questioned the building of a place of worship by Pastorius, is a fancy of the writer, who quotes p. 15 of the *Memo-rial* to prove it; this is a note to an extract from the records in the exact words, as follows: "At a Court of Record held at Germantown, 20th day, 11th month, 1693, Jacob Schumacker delivered to the people called Quakers, a deed containing three perches square for a *meeting house*."

"The note is as follows: Dr. Seidensticker says, in an account printed in the *Penn Monthly*, January and February, 1872, that the first *meeting house* was built in 1686. How can this be, when the lots were not divided until 1689?"

I had called Pastorius' building a church, and was trying to prove that lots could not have been bought or sold or a *conveyance given* for the purpose of a Quaker meeting house until they were divided; but the German company, of which Pastorius was the head, could and did set apart a lot and build on it a church.

The Friend is as confident as I was, that the Quakers for the first seven years worshiped in private houses, and has even

⁷ The settlers built their houses before that date, on lots of three acres, but I am informed that actual deeds were not given until 1689.

pointed out where several of these stood. Only a few weeks ago, I visited the remains of the original wall of Tennis Kunder's house, which he describes as standing opposite Manheim street. Why am I condemned for making a statement which he corroborates? Why did the *German Quakers* hold their meetings for seven long years in Friends' houses, if they had a *meeting house* in the centre of the town, built in 1686? Why is not the place and site of this church pointed out in the very elaborate account of "The first Germantown Friends" and their meeting places? Because Pastorius was not a Quaker when he came here, and his church was not a Friends' meeting house. Let us turn to his own narrative and give the German words:

"Wir haben allhier zu Germanton Anno 1686 ein Kirchlein für die Gemeinde gebauet, darbey aber nicht auf äusserliches grosses stein Gebaude gesehen, sondern dass der Tempel Gottes (welcher wir Glaubige selbst sind) gebauet werde, und wir allesamt heilig und unbefleckt seyn mögen." p. 34.

"We have built here at Germantown, Anno 1686, a little church for the community, but not a great stone building to be looked at, but that the temple of God (which we believers are) may be altogether holy and pure."

No one surely can go back of this statement, and the inference is that the church was a *small stone* building like many of the other early houses of Germantown. One who has ready access to all the records of Friends should easily point out the site of this church, if it was, as the article in the *PENN MONTHLY* asserts, a Quaker meeting-house. Why does *The Friend*, in its very particular mention of the first Quaker meeting-houses in Germantown, neglect to allude in the most distant manner to the little stone church of 1686, built by those whom he so confidently calls "our German Friends?" My "theory" is, that this building stood in front of the sixth lot, which is described as near the middle of the town. If my Germantown critic would search among old deeds, as the following shows that I have done, some additional light might be thrown upon the subject.

"To all to whom these presents shall come, the now Bailiff, Burgess and Commonalty of Germⁿ in the County of Phil. and Province of Penn send greeting—

"Whereas the first settlers of Germⁿ aforesaid, Anno Dom. 1683, have laid out and reserved before the sixth lot on the *west* side of the said town one acre of land for a market, town house, burying

place, and other *public buildings*, uses and behoofs whatsoever, the said sixth lot then being the midst or centre of the aforesaid town, and for as much as afterwards the then Bailiff, Burgess and Commonalty of the said town, by a certain deed under their hands and seals bearing date the 3d day of the *first* month called *March* in the year 1692, have granted and exchanged to and with Paul Wulf one quarter of the aforesaid and one acre of land for and in consideration of one whole acre, whereof one half an acre is situate on the east side of said town and the other half on the west side of the same town, as by said deed more fully appears."

This document proves false, as will also another, the last sentence in the following paragraph, copied from the PENN MONTHLY article, pp. 497, 498:

"That there shall be a general meeting movable at the four several places, viz: at Germantown the last 4 day of the month, next ensuing, and the next to be at Byberry the last 4 day of the month, the next to be at Oxford on the last 3 day of the month, and the next shall be at the house of Richard Stoll the Elder on the last 5th day of the month." It would seem, therefore, to be a mere caprice to deny that the Germantown 'meeting' to which Pastorius belonged, was a Quaker meeting. There is no particle of evidence for Mrs. James's assertion: "*The Church of 1686 was built for the colony and was used for all public purposes.*"

Certainly town meetings could not be held in 1686 or 1688, because Germantown had no corporative existence till 1693, and no other Christians preceded the Quakers in organizing there a religious society.

The writer confounds the "corporate existence" of German-town, which began as a society in 1683, with its city charter, some years later, two entirely distinct affairs. Can he tell us how the business of the town, the next in importance to Philadelphia, was carried on for those ten years without meetings analogous to those called town meetings? Is it supposable that its inhabitants—the Commonalty as they are called—unacquainted with the language of their English neighbors, did not meet among themselves and discuss the entangled affairs of the company, the lots they wanted, how their houses should be built, the hiring of the "naked going savages" to assist them in the building, and the hundred other daily needs of a colony? The deed here recited shows there was a Bailiff, Burgesses, etc., in the first month of 1692, a year before the writer acknowledges Germantown to have had a corporate existence. Where is his proof for the clause "no other Christians preceded the Quakers in organizing there a religious society?" It

is probably as strong as that educed to prove his statement "that the place of worship built in 1686 belonged to the Quakers is confirmed by an entry in the minutes of Abington Meeting, where, under date of 26th of 12th mo., 1704, we read as follows: 'At this meeting Friends of Germantown having laid before us that they intend to build a *new* meeting-house next summer,' etc., etc." Taking the ground that this would succeed the church of 1686, a slight thread of proof indeed, which the writer in *The Friend* has snapped without knowing it by the deed of Shoemaker, the statement corroborating my supposition that a Quaker meeting-house was built on that land about 1693.

Watson in his *Annals of Philadelphia* prints in parenthesis ("of Friends") after the words "public meeting house," when copying the records of the first court held in Germantown; this is one of the glosses against which I protest as tending to mislead the candid reader. *The Friend* asserts that at the above date the Germantown Quakers held their meetings for worship at private houses, and that their *first* meeting house was not then built. I entirely agree with him, and prove by this record two points which my critic in this magazine denies: First that this public meeting house was that of 1686 "*fur die Gewinde gebruct*, and that I not only have a "particle of evidence" that it was used for public purposes, but the very heavy substance, if there can be substance in any legal document. Secondly, that two years before 1693 Germantown had a corporate existence, if a Bailiff and Burgesses can give it one—which doubtless further research would prove extended to 1684, not merely 1689 as Watson says. I had neither time nor space to go into the detail of this matter in the *Potts Memorial*, but because I did not make extracts from Croes, Sewell, Besse, Proud and a host of other Quaker writers, it is presumed I have never read them, and I am accused of pretending to write history without knowing much about it. Is it from a desire to conceal the fact that one of the strongest proofs I give that Pastorius was not a Quaker in 1688 is not alluded to by my opponents? In a note on page 24, *Potts Memorial*, I have printed "Pastorius in a letter to his father, dated Germantown, June 6, 1692, writes 'My wife bore to me March 30th, 1690, a little son called Johan Samuel, and April 1692, she gave me a second son, whom we have named Henry, in holy baptism.' This

last proves Pastorius was not a Quaker, as that sect denies the sacrament of baptism." The German words may be found page 60 of Pastorius' letters, and are as follows :

" *Und dann Anno 1692, den Aprilis das zweyte, deme der name Heinrich bey der heiligen Tauffe gegeben worden.*"

Why do not my opponents find in Friends' records the birth and baptism of this child. I trust that the Bible of Pastorius, the early register of some Lutheran church, or the records of births, deaths and marriages of the church of 1686, no doubt kept by so learned and careful a man as Pastorius, may yet be found and given to the world in print. I ask for records previous to 1693, when the first *meeting-house* was built in Germantown.

It seems strange to me as well as other outsiders that if half or even less of the early German settlers were Quakers, all the records of births, marriages and deaths in that closely settled community should be recorded at Abington, an outlying district thinly peopled, and that every one from a *town* should go miles away for religious instruction ; just as if Penn, instead of establishing a Philadelphia meeting, had connected his new city with Chester⁸ where he landed, or the meeting at the Falls, near his own country seat. Indeed, there would be even less absurdity in this, than that a compact town containing within itself all the materials of a self-supporting colony, should go miles away into the country for religious instruction among the partially cleared forests of Abington, where a few English were reclaiming farms. The present writers forget or are ignorant that Pastorius asserts that he wished to keep his German colony by themselves ; the almost trackless forest and the barrier between the language of Penn's colony and his own were a tolerable guaranty of its accomplishment. Those Germans, who were Quakers in their own country, like Shoemaker and Tennis Kundens, held meetings in their houses and were registered at Abington ; but if a man like Pastorius, of high standing and condition abroad, was a Quaker in 1688, why is not his certificate or conviction recorded, as we find those of the analogous Welsh colony of Pennsylvania, under Lloyd, still extant.

⁸ George Fox visited the Delaware in 1671-2, and ordered monthly meetings of men and women to take care of the outward concerns of the church. See Fox's *Works*

Some Quakers will say, because there was no organized meeting in Germany, which I think they will find to be an erroneous statement, if they read Fox's travels in that country.

If Pastorius was a Friend, some record of the fact ought to appear before his signature to the paper against Keith, 1692, which is the earliest date given in the reiterated assertions by my opponents, who overwhelm the reader with dateless statements and logical remarks like the following, PENN MONTHLY, p. 502: "It is of no consequence whether Pastorius was a Quaker when he arrived in Philadelphia; we surely find him one by documentary evidence after he had been here *several years*." This sentence strikes the key-note of both articles: it is a foregone conclusion that I am wrong, though I have never for a moment doubted that Pastorius became a Friend after he had been "here several years." I only assert that he was not one in 1688, when he signed the anti-slavery protest. I have advanced no "theory" as to the pressure brought to induce him to side against Keith; pages 55 and 56 of his letters are devoted to the quarrels among Quakers and the account of the application of both parties to him in his official capacity as the Governor of the place, to turn the other out of Germantown; the following statement is of a later date than the account of Keith's separation:

"Heisige Provintz nimmt noch von Tag zu Tage zu, an Menschen und menschlicher Bosheit, da die Religion-Strittigkeiten mit Macht angehen, und des Disputirens (in Ermanglung eines Consistorii) kein Ende ist."

"This province increases every day in men and human wickedness; and religious strifes go on with great power, and there is no end to the disputes for want of a Consistorium."

May I humbly suggest that he had hoped to find in the discipline of the Friends' society something analogous to the lamented Consistorium of Germany, a body which decides what one must believe.

A word upon the subject of the Trinity before I bring this long article to a close. If need be I could cite many orthodox divines of the seventeenth century in support of my words. It is the one point upon which they all agree that Fox had taken up a well-known⁹ heresy in the church upon this doctrine. The liberal Roger Williams, who was turned out of the Puritan settlement of Salem, and founded Rhode Island, has no patience with the great

⁹ The Arian heresy of the 4th century.

preacher. I would refer the reader to "George Fox digged out of his Burrows" (a rare and curious book), as well as a host of greater lights in England and this country who entered into the controversy, and whose pamphlets and volumes are doubtless to be found on the shelves of the Philadelphia Library, as they are on those of Harvard University. P. 502 PENN MONTHLY, it is said a Latinized equivalent for the word Quakers implies no disrespect. However it may be when put into Latin, the original English was used in scorn.—*Works of George Fox*, vol. iii. p. 11; *Ibid*, p. 125. The title page of Barclay's *Apology*, "The people called in scorn Quakers," and many other Quaker books.

Should not the writer in the PENN MONTHLY, when saying that Friends' petition for restoring Penn to his government contained the name of Pastorius and twenty-nine other inhabitants of Germantown, have quoted from p. 16 of *Potts Memorial*, one of the facts given to prove that Pastorius and some of the original thirteen families were not Quakers in 1691? It is there said: "A petition (in 1691) of 64 inhabitants of Germantown, who being foreigners and not freemen according to the laws of England, equested to be made freemen for the better securing of their estate, both real and personal. 'Those marked q. are Quakers.' Twenty-four out of sixty-four have this letter appended, showing that a fraction over one-third of the (German) taxables only were Friends. Of the original householders the following are thus marked: L. Arets, T. Kunders, R. Tysen, William Streepers, Peter Keurlis, and Jan Lucken." The reader will not find either of the four names here which are on the protest. I have also reason to complain of the turn given to the sentence in my book about "a community which kept the 28th of December." The very gist of the matter I give in the following italics: "... the plaintiff by reason of conscience, viz: that this day was the day wherein Herod slew the Innocents, and also *that his witnesses were and would for the aforesaid reason not be here*, desired a continuance," etc. The conclusion I drew from this was that Matthew Smith and his neighbors, residents of Germantown, were keeping Christmas, which was not allowed by the Quakers. The writer makes no mention of *the witnesses*, in his flight of fancy that Matthew Smith may have been a Roman Catholic, and of course all his

neighbors, the witnesses in the case, also; every antiquarian in Philadelphia affairs of that date knows this would have been impossible.

By drawing the inference from "we" and "us," my critic claims that the Friends were the only religious body who believed in the 8th commandment. "We, who profess that it is not lawful to steal"—any child tolerably well instructed in the catechism could tell him that the "we" here means "we Christians." I cannot see that the word "us" has much more to do with proving that the Germans who signed to the protest were Quakers. "Europeans desire to know in what manner Quakers do rule in this Province, and most of them do look upon us with an envious eye." The government of the Friends is the point in question, and the Germans living under that rule might well use the "vinculum" us to say that if the *Germans* do not "help to stop this robbing and stealing," they will be classed with receivers of stolen goods, and be declared by the Europeans thieves and robbers too.

While I cannot expect that the facts here given in proof of my opinion will have any weight with prejudiced minds, there is still a large class of people, and among them Quakers, who desire that the truth may be known. To these I confidently address myself, hoping that tardy justice may be shown to that small band of loving German hearts whose protest proves them much nearer the Great Light of the World than those whom they so tenderly yet so powerfully addressed. "By their fruits ye shall know them."

ISABELLA JAMES.

Cambridge, Mass., Dec. 19.

EDITORIAL NOTE.—From a desire to see fair play and to have the truth established, we have broken through our usual rule for the exclusion of merely controversial papers, and have given Mrs. James a hearing. Part of what she has written has no pertinence to Dr. Seidensticker's review of her book, but is admitted to these pages because, as we understand the case, she was refused a hearing in other quarters. Apart from all questions as to the merits of the case, we regret that she has seen fit to complicate her historical arguments with reflections upon a most estimable religious body, and we entirely disclaim all agreement with the

opinions that she has expressed on this head. Nothing can be more natural and praiseworthy than the spirit that honors the confessors of the past for their testimony, and that upholds the honor of the religious ancestors to whose struggles the present of peace and liberty is due. And when our author classes her assertion of her own views, with the reckless aspersion of William Penn, by a historian descended on the one side from a Highlander and on the other from a Quaker, and distinguished for the pertinacity of his abuse of Highlanders and Quakers, she does herself an injustice.

As to the merits of the case, all parties are agreed that Pastorius was not brought up a Quaker; that the German settlers of Germantown were only in part Quakers; that some of them, including Pastorius, became Quakers during or before their residence in the country, (more probably the latter,) and died in that religious connection. The question in dispute is this: Was that change of religious profession before or after 1688, when the *Protest* in question was presented; and, incidentally, was the place of worship erected in 1686 a Lutheran church or a Quaker meeting house? The quotations dated 1692 in regard to the baptism of Pastorius' son, and that in regard to the need of a consistory, especially the former, do seem to indicate that up to that date Pastorius was still, as in early life, a Lutheran of the Pietistic or Spenerian school, and his description of the little church in 1686 seems to point in the same direction. But it must be remembered that from extreme Pietism to Quakerism was a very easy transition, and that the man who had made it would be not unlikely to retain in use many phrases that had really ceased to represent anything actual in his life—that were merely proverbial expressions, as when the word *christen* is colloquially used of giving a name to anything. Such phrases we may call *survivals* of an earlier stage of life.

On the other hand, it must not be forgotten that the early Quaker Society was an exceedingly High Church organization. While it asserted the indwelling presence of "the inward light" in every man's heart, it refused all recognition of any religious society but its own. It held no intercourse with them. When, therefore, we find on the minutes of an early Friends' Monthly Meeting the record of a paper received from another "Meeting,"

and referred by the Monthly to the Quarterly Meeting, the presumption that the Meeting with which that paper originated was a Friends' Meeting, is very strong indeed, and needs unquestionable evidence to set it aside. Whether the arguments presented by Mrs. James in her book, and reproduced in this article, are of that character, is a point about which there may be an honest difference of opinion, and there is no need of supposing prejudice, unfairness or lack of attention to facts, as the ground of that difference. That one so well acquainted with the early German history of Pennsylvania as Dr. Seidensticker, and so free from any Quakerly "prejudices"—being himself a Lutheran—has taken the opposite view to that urged by Mrs. James, affords very strong presumption on the other side.

As Dr. Seidensticker's article was printed during his absence in Europe, he is not responsible for the misprint "Morrell," and it is not a fair parallel with *Tremulendos*.

ACRELIUS' HISTORY OF NEW SWEDEN.

A HISTORY OF NEW SWEDEN OR THE SETTLEMENTS ON THE RIVER DELAWARE, by Israel Acrelius. Translated from the Swedish by Rev. M. Reynolds, D. D. Published under the joint auspices of the Historical Societies of Pennsylvania and Delaware. Phila. 1874. Pp. L. & 458.

This translation may very properly be considered as an important addition to our information on colonial times, as the original has been, to some measure, a sealed book not merely on account of the language in which it is written, but even more so in consequence of the great scarcity of copies, the edition of the work, it is believed, having been a very small one.

Israel Acrelius was one of the many ministers whom the Swedish government sent to our shores to attend to the spiritual wants of the Swedish settlers. For although New Sweden was a colony, connected with the mother country only from 1638-1665, the home government continued to provide properly qualified ministers for the Swedish inhabitants on the Delaware long after all political connection had been severed. As a remark-

able instance of the deep interest taken by Swedish sovereigns in the church concerns on the Delaware, the fact may be mentioned that the chivalric and impetuous Charles XII., during his campaigns in Poland and Russia, and even during his unfortunate sojourn in Turkey gave his attention to this apparently insignificant mission, several of his orders in regard to the ministers, being dated from his camps in those countries, e. g. from his head-quarters at Smorgonia in the Polish province of Lithuania, and from his camp at Tamerlash, near Adrianople, in Turkey.

Israel Acrelius arrived in Philadelphia on the 6th of November 1749, having originally been appointed to the ministry of the parishes of Raccoon and Pennsneck, in New Jersey. The death of Rev. Mr. Tranberg, minister at Christina (Wilmington), caused his immediate transfer to that place. He remained there as rector of the church and provost over all Swedish congregations till 1756, when he returned to Sweden and took charge of the pastorate at Fellingsbro. Here he remained during the remainder of his life, dying in the year 1800 at the patriarchal age of eighty-six.

His book appeared at Stockholm in the year 1759, under the title: "Beskrifning om de Swenska Församlingars forna och närvaranda tilstand uti det sa kallade Nya Sverige." (Description of the past and present condition of the Swedish congregations in the so-called New Sweden.) But he gives a great deal more than the title would lead to suppose. His habits of mind were remarkably well suited for collecting and arranging information on all the concerns of his temporary home. Nothing more systematic than the framework to which he adapts his narrative; there is a pigeon-hole at the proper place for every fact and item that he wishes to commemorate. He gives a very full account of the affairs and the ministers of the Swedish churches at Christina (Wilmington), Raccoon, Pennsneck and Wicacoa, as well as of the political history, natural resources, industry, customs, etc., of the people of Pennsylvania. His style is simple and unpretentious. The difficulties, heart burnings and feuds that arose between the Swedes and Hollanders on the shores of the Delaware, are told with an almost Knickerbockian *naïveté*. Their declarations, manifestoes and protests are fraught with a consciousness of importance, that leaves

no doubt, had either nation succeeded in establishing a permanent colonial power on this continent, "*tantae molis erat*" would have been the proper motto.

"The Holland Commander," Acrelius relates, "had erected the arms of the States' General upon the shore of the river, but the Swedish Governor ordered them to be torn down. A Swedish lieutenant was bold enough to perform this errand at Santhickan, now the town of Trenton, where the falls of the river are. When the Hollanders asked him, 'How dare you do such a thing?' he answered: 'If the very standard of the States' General stood there, I would treat them in the same manner.' This was done on the 8th of September, 1646." We are not told whether the Hollander survived the shock.

"However jealous," says Acrelius, "the Hollanders were of the Swedes for the advantages which they thus gained, and however they contended with each other for these things, yet they were always equally united when it came to shutting the English out of the river." It would almost seem as if both had had a presentiment of the manifest destiny, which awaited them at the hands of John Bull.

When the English tried to get a footing on the Schuylkill by building a fort there, Governor Kieft gave orders to Jan Jansson Ilpendam to "compel them in a polite manner to remove, so that no blood shall be shed. If they refuse this, he shall take them into custody, etc. If the English are either taken or driven away, he shall completely demolish the place." The instruction was carried out, the Swedes helping with alacrity.

The political history of the country under the Swedish, Dutch, and English governments is delineated in its main features up to the times of Acrelius. He, of course, did not much sympathize with the successors to Swedish supremacy. Of the Hollanders he complains bitterly. "The terrible tyranny to which the Swedes were at that time subjected cannot be fully described." Nor was he pleased with the course of the proprietor with regard to the land held and claimed by the Swedes.

"When Penn came to the country the second time, he offered the Swedes ten thousand acres of land in Manathanim, sixty miles higher up in the country, with the pretext that they might have here more room and live together. But the upshot was to get

their homes for his Quakers, and few, therefore, accepted the offer. In this the secretary, James Logan, had his hand especially. He was a stiff Quaker, and the object was both the oppression of the Swedes and the advantage of the Penn family."

Quite valuable and interesting is the information Acrelius gives of the resources of the country, and the industrial pursuits of the inhabitants. He speaks of the soil, the various kinds of produce, live-stock and pasturage, describes the customs and manners of the people, and gives a much fuller account of the iron manufacture in Pennsylvania than his scientific countryman, Peter Kalm. Curious and evincing his statistical turn of mind is the enumeration of drinks used in Pennsylvania. The long roll comprises forty-eight different varieties, of which four only would be acceptable to a strict temperance man, while No. 45 lumps together all sorts of "liquors called cordials," too numerous to mention. Acrelius not only gives the names—some of them strongly reminding of fancy drinks—but also describes shortly the manner of their preparation, sometimes stating at what occasions they were used, thus:

"23. Punch is made of fresh spring-water, sugar, lemon-juice, and Jamaica spirits. Punch is mostly used before dinner, and is called 'a meridian.'"

"24. Mämm, made of water, sugar, and rum, is the most common drink in the interior of the country, and has set up many a tavern keeper."

"27. Hot rum, warmed with sugar and grains of allspice; customary at funerals."

On the history of the Swedish churches, Acrelius' book is the main and, upon many points, the only source of our information. As he was a good Swede, so he was a good Lutheran, and unreservedly expresses his repugnance to the views of the Quakers and Moravians. Zinzendorf's appearance caused quite a commotion among the faithful; his pious impetuosity and his attempts at an amalgamation of Lutherans and Moravians were not appreciated; in fact, the Swedes looked upon the Count as an intruder, just as the German Lutheran clergy of Philadelphia did. The consequence of the well meant but ill advised efforts on the part of Zinzendorf's adherents were scenes of disorder, a repetition

of the disagreeable encounters in the German congregations at Philadelphia and Lancaster.

The time came when the Swedish churches, after outliving by more than a century the colony of New Sweden, began to feel that their isolated position could not be perpetually kept up. By their confession they naturally leaned towards the German Lutherans, of Philadelphia, and an intimate union with them appears at one time to have been seriously contemplated. But as it was the English language which gradually superseded the Swedish, and as a friendly intercourse had sprung up with the Episcopalians, the change, when it came, was in favor of the Church of England. This was after Acrelius' time, but numerous instances of a mutual good will between Swedes and Episcopalians are recorded by him. Thus the church of Wicacoa was repeatedly thrown open for English service, Swedish ministers preached in English and English ministers for the Swedes.

"In the year 1710 the English Established Church in Philadelphia was enlarged, and then its minister and people requested permission to hold their services in the meantime in Wicacoa, which was granted. The English Presbyterians had offered their meeting house, but they declined it."

Rev. Mr. Dylander became so popular as a minister, that "the greatest number of marriages were celebrated at Wicacoa." This increase of patronage on the one side withdrew considerable emoluments of office on the other; hence the English minister felt himself aggrieved and made complaint to the governor, without, however, obtaining the redress which he sought.

The History of the Congregations up to Acrelius' own time is full of interesting particulars, which no one who wishes to be familiar with the concerns of Pennsylvania can afford to pass by. The translator's short account of the ministers of the respective Swedish congregations up to the present and the appendix on the churches of Kingsessing and Upper Merion form a very welcome supplement.

Acrelius winds up with the narrative of visits paid by him to the monastic establishment at Ephrata, in August, 1753, and the Moravian convents at Bethlehem, in June, 1754. His account is full of interest, giving glimpses of a critically inclined cotemporary into those institutions. Of the Ephrata cloister no similar de-

scription is to be found anywhere. Acrelius seems to have been better pleased with the well-educated Prior P. Müller, formerly a minister of the Reformed Church, than with the ecstatic founder and head of the monastery, Father Friedsam Gottrecht, by common mortals yecept Conrad Beissel. That the religion of these German Seventh-day Baptists was strongly tinctured with J. Böhme's mysticism, appears to have escaped Acrelius's observation. Though both at Ephrata and at Bethlehem he was nothing better than an enemy in the camp, he evidently tried to give a fair and impartial statement of what he saw and learned.

The translator has taken great pains in adding to the usefulness of Acrelius's book by historical foot-notes and an introduction, both evincing great familiarity with persons and events little known at our times. That the translation has preserved the simple old fashioned style of the original is very proper and in good taste.

THE CHILI EXPOSITION OF 1875.

THE opening of the great Exhibition of Industry by our sister republic of Chili may well attract our attention to the record of growth and prosperity exhibited there, in strong contrast to the other countries of the South American continent. In a late message the President recited, among other events of the year, the opening of a great hospital with seven hundred beds, and the beginning of another to outstrip it, both built mainly by private offerings, and to guard against epidemics which had severely plagued and punished their earlier neglect of sanitary precautions. The boundaries with its near neighbors and the treaties with its distant allies were all reported to be regulated in a way likely to preserve peace for years, and so ensure its rapid progress. A whole net of railroads is in the course of growth and developing the resources of the country. A great Lyceum and the Exhibition Building are the two great features of Santiago, the capital of Chili, for 1875, while three armed vessels were on their way from England to secure the protection which the country needed. National income and trade were both reported to be rapidly growing,

and education was being largely improved. Tobacco was made a staple, and mines and other industries were increasing in their yield under more scientific management. A new hydrographic institute was established, and other popular means of instruction were being planned. There were great law reforms under way, a new military code, a new mining law, a new code of civil law, and new courts, new prisons, and a reform in the old Spanish laws, which were quite unfit for modern civilization, as well as new election laws and new laws to regulate Church and State. There can be no better way of making the progress thus far reached in every way well known, than by the proposed National Exhibition. The official programme shows that it is to be on a scale worthy of the notice and participation of our own traders and business men, especially of those who are looking for new fields of labor and new markets for their goods. The Exposition is to open on the 16th of September, 1875, and to close on the 31st of December following. The object is two-fold—to show the progress Chili has made since its last exhibition in 1869, and to invite and promote the display of new products, the establishment of new industries, and the introduction of the latest improvements for agriculture and mining, the two great industries of the country. The National Government has erected a suitable building, covering an area of two square miles, with abundant facilities for the practical exhibition of water-power, agricultural and other machinery on the grounds. The four great divisions of the articles on exhibition will be Raw Material, Machinery, Manufactures and Fine Arts, and there will be a special section on Public Instruction, devoted to the exhibition of the material used and the methods followed in the primary schools for children, and schools for adults, and in secondary and university education; and with this there will be an International Library, to be established in Santiago as a permanent memorial to commemorate the exhibition.

In 1869, Chili held an International Agricultural Exhibition, and since that time it has made such advances as well deserve to be especially marked. Besides the enormous growth of its coast trade, there are lines of steamers running to Liverpool and Bordeaux, Hamburg and Antwerp. Mining, another of the great sources of wealth for the country, has acquired an additional interest, owing to the abundance and variety of its products. The

quantity of copper produced in Chili is fully two-thirds of the total produce of the whole world. The several mines of Copiapo, Huarco, Florida, and other less familiar points, are renowned for their richness. Chili possesses extensive coal deposits along her coast, and many of them are worked on a large scale, and in the south there are rich and abundant iron veins waiting for capital. The wise use of the credit secured by a long career of peace and prosperity, has developed the great modern institution of joint-stock companies, and Chili has \$150,000,000 invested in banks, railroads, other than those of the State; steamships, fire and marine insurance; saltpeter, and other mining and manufacturing companies. It is sincerely to be hoped that the exhibition of 1875 will advance and improve the political and commercial relations of Chili with foreign countries, and especially with her ancient ally, the United States. With characteristic liberality, the Chilian government promises forty dollars in gold for passage-money of every person coming in charge of machinery for the Exhibition, and the South American line of steamers will take all goods for the Exhibition free of freight.

The special premiums of peculiar interest to foreigners, and already determined upon by the Executive Committee, are:

First. One thousand dollars, gold, for the best narrow-gauge railroad, not exceeding three feet, shown by fixed and rolling-stock, including locomotive and tender, sufficient to accommodate and carry 60 to 100 tons up gradients of one in fifty, with curves of 164 feet radius.

Second. One thousand dollars, gold, for the best system of measuring and distributing water for purposes of irrigation in specified or proportional quantities, to be accompanied by the necessary apparatus to demonstrate its applicability to the requirements of the country.

Third. Five hundred dollars, gold, for the best exploring drill adapted to mining operations of coal, iron, copper, silver, gold, etc. Then there are gold, silver, and bronze medals, to be awarded in each section of the enumerated and classified catalogue. The Chilian consuls in our own and other great cities, and a long list of merchants doing business in the principal ports with those of the western coast of South America, are the commissioners who, in connection with the diplomatic representatives of the

government, are engaged in bringing this matter home to mechanics and machinists likely to bring their inventions to Chili. We trust that our own city, with its varied and manifold industries, will be well represented at Santiago, and thus help to reestablish the trade and connection which of old made such intimate relationship between our old merchants and those of Chili.

PARKMAN'S OLD REGIME IN CANADA. ¹

WHAT Prescott and Irving have done for Spain, Parkman has done for Canada. His several works on its history constitute a series not yet complete, of which the present volume is the fourth. They do not follow in chronological order, but each is complete in itself, and while giving a full account of its special subject, constitutes a portion of the general history, co-extensive in time with others of the series. Though it is not our history, yet to us it should be full of interest. Side by side with the founders of the English Colonies in North America, men of a different race and a hostile creed established themselves, and strove to build up a new France in the new world. The story of their attempt and how it resulted constitutes Mr. Parkman's history.

The conquest of Canada by England in 1763 ended the contest for supremacy on this continent between England and France. Little did the former think, as together with her colonies she exulted in the overthrow of her rival, that she was preparing the way for the revolt of those very colonies. There is extant a most remarkable letter of the Marquis de Montcalm, in which he prophesies, as a consequence of the downfall of the French power in North America, the independence of the English colonies, between whom and the mother country one strong tie, that of protection and dependence, was thus severed.

But though the dominion of the French has passed away, it has

¹The old Regime in Canada. France and England in North America. Part IV. By Francis Parkman. Boston: Little, Brown & Co. Philadelphia: Claxton, Remsen & Haffelfinger.

left indelible traces, not only in the region where was its seat, but in others far distant in that great west, which their successful rivals did not till long after even attempt to occupy.

While the English had not yet ventured more than a couple of hundred miles from the Atlantic coast, French traders and explorers had traversed the great lakes, descended the Mississippi nearly from its source to its mouth, become familiar with the Ohio, discovered the Rocky Mountains, and threatened the outposts of the Spaniards in Mexico. Their statesmen conceived the bold plan of establishing a line of French posts from Quebec to New Orleans, to check the westward advance of the English, a plan which Braddock's expedition against Fort Duquesne was designed to crush; and Detroit, Prairie du Chien, St. Louis, New Orleans, and scores of other French names in the Ohio and Mississippi valleys mark their footsteps.

The sceptre has departed from them, but these were no slight achievements, and the history of these achievements, and of the men who accomplished them, and their government and institutions, is well worth attention. Mr. Parkman's present volume treats of these last as existing in the period of about 125 years, from 1640, when, from a few scattered trading posts and missions, the colony may first be said to have come into being, down to the English conquest in 1763. Nor is his a mere recital of events; he lays before us extracts from the letters of numerous persons of note in all ranks, governors, officers, ecclesiastics and others. He lets us into all the secrets of state, and discloses motives, intrigues and animosities, whose effects only were visible when they existed. On his stage the actors are no mere lay figures clothed with a set of qualities: the very words they wrote and spoke are told us, and in his vivid descriptions they "live and move and have their being" like the men of to-day.

The opening chapter finds the French in the midst of a war with the Iroquois, fighting desperately for life, and calling lustily on the Virgin and all the Saints.

The Iroquois or the Five Nations are entitled to special mention. Of all the Indian tribes encountered by either French or English, they were by far the most formidable. With the characteristics common to all the North American Indians, they displayed others which evinced their decided superiority. In their personal

habits and modes of life they were not specially remarkable; it is their social and political status that deserves comment. They comprehended what few savages can, that in union there is strength; and they never quarreled with one another. In spite of jealousies and bickerings, Mohawks, Onondagas, Oneidas, Senecas, and Cayugas met in peace around the grand council fire. In the adoption of a settled and definite policy, and the maintenance of continuous and concerted action in carrying it out, they rose high above the level of the savage. Their hate once aroused, no distance of time or space could protect its object. "One war at a time" was their sage motto. Directing their attacks in turn against one after another of the neighboring tribes, they drove off or exterminated them all, and vast tracts of country around their borders were at last tenanted only by scattered remnants of once powerful nations. The terror of their name spread far and wide; they fought with the Cherokees on the plains of Kentucky, and pursued the Algonquins far into the recesses of the North; the Long Island Indians obeyed them, and their war parties drove the Illinois over the Mississippi. It has even been suggested that their confederacy served as a model for the union of the thirteen English colonies in the war of the Revolution. It was with these fierce foes that the French colonists were for years in an almost chronic state of hostility. All the horrors of Indian war abounded, the midnight attack, the sudden onset in field or forest, the skillful ambushade. The French fought as men fight in a war where capture is worse than death. Religious zeal also animated their courage. They were sustaining the cause of God against the allies of Satan. The war became "a holy war," and there was formed at Montreal a military fraternity called Soldiers of the Holy Family of Jesus, Mary, and Joseph. One hundred and forty men enrolled their names, which are still to be seen on the ancient records of Montreal.

Such was the war which scourged Canada, and among the many gallant deeds in its conflicts there shines forth one, well called "one of the most heroic feats of arms ever achieved on this continent."

In April, 1660, Daulac des Ormeaux, a young officer, commandant of the garrison at Montreal, asked and obtained permission to lead an expedition against the Iroquois, who it was be-

lieved were preparing a descent on the French settlements. With sixteen companions he took an oath to accept no quarter; and having made their wills, confessed and received the sacraments, they set forth to meet and fight the Iroquois on their own ground, well knowing that they themselves would never return. "The spirit of the enterprise was purely mediæval. The enthusiasm of honor, the enthusiasm of adventure, and the enthusiasm of faith were its motive forces."

The little party ascended the Ottawa till they reached a long rapid known as the Long Saut. The Iroquois were sure to pass this point, and in a rude fort below the rapid it was resolved to make their stand. Joined by 40 Hurons and 4 Algonquins, led by rival chiefs, who hearing of the enterprise had wished to take part in it, they awaited their enemy. In a day or two the scouts gave warning of their approach, and some two hundred Iroquois furiously attacked them. Three times they were beaten off and so discouraged that they discontinued their assaults, waiting the arrival of reinforcements. At the end of five days, during which a desultory fire, the constant threat of attack, hunger, thirst and sleeplessness had worn out the French, five hundred fresh warriors appeared, and the combined force made a furious onset, which was unsuccessful like those which had preceded. Discomfited, the Iroquois fell back, and three days more were passed in useless attacks. The Hurons had all deserted except their brave chief, enticed by the promises of the enemy; the Algonquins could hope for no mercy, and remained. At last a general assault overcame the weakened garrison; the Iroquois burst in on every side; not a man surrendered; all were shot down. On examination four Frenchmen were found not quite dead; three were burned on the spot, and the other reserved for future torments. Our author concludes:

"The Iroquois had had fighting enough. If 17 Frenchmen, 4 Algonquins and 1 Huron could hold 700 warriors at bay so long, what might they expect from many such, fighting behind walls of stone? For that year they thought no more of capturing Quebec and Montreal, but went home dejected and amazed, to howl over their losses and nurse their dashed courage for a day of vengeance."

No abstract can do justice to Mr. Parkman's spirited narrative

of Daulac's and his companions' self-sacrifice, for such it truly was; it saved Canada from a disastrous invasion.

Our history now turns to quarrels of a different nature. Outside war did not produce internal harmony; in fact, the normal state of Canada seems to have been one eternal wrangle, Jesuit with Sulpitian, Montreal with Quebec, ecclesiastical with civil power, Governor with Intendant, and minor squabbles of every degree.

The causes were manifold. In the early days of the colony, when the population consisted of but a few fur traders, the Jesuits were all powerful. With its growth came an increased attention on the part of the royal government, more numerous and more important officials, and the civil power began to make itself felt, much to the distaste of the reverend fathers who had aspired to rule supreme. "The epoch of the martyrs and apostles was passing away, and the men of the sword and the men of the gown, the soldier and legislator, were threatening to supplant the paternal sway of the priests." Meanwhile the Sulpitians had also gained a foothold in the colony, having established themselves at Montreal, and a bitter contest, as to who should give a bishop to Canada, arose between them and the Jesuits, which ended in the triumph of the latter, and the induction of a pupil and partisan of theirs as the Pope's Vicar Apostolic for Canada.

This was Francois Xavier de Laval Montmorency, known generally as Laval. He is a prominent person in the history of French Canada, and Mr. Parkman has drawn his portrait with a master hand. "Conscientious, zealous, dogged and pugnacious," given up to austerities and mortifications, and at the same time of a hard, domineering, practical nature, intolerant of any authority save that of the church, it was impossible that he should not quarrel with the representatives of any power who did not bow before him. In one of his sermons he declares that, "the State should be subject to the Church."

One governor after another, Argenson, Auvangour, Laval's own choice Mezy, agreed in little else than in their opposition to him.

So much for the quarrels of those high in place; the lower orders followed the example set them. The population was as a whole an idle one; an enforced idleness indeed, but not the less

harmful. Trade, commerce, agriculture languished under the incubus of absurd laws or rather decrees, which were constantly changed, but seldom improved.

There were no fields of enterprise open except the illicit trade with the Indians, which the officials, high and low, were determined to engross for themselves. The people, mainly of Norman origin, were of a litigious disposition. The long, cold winter put a stop to out-door pursuits in great measure, and the numerous church festivals left but ninety working days in the working season. The boundaries of lands were often undetermined, and the consumption of brandy was enormous.

The colony was now to enter on a new phase. Louis XIV. in 1663 placed it under the government of the crown. It was soon after his accession, and Mr. Parkman gives us a brilliant picture of the young monarch, in the morning of his reign, the central figure of his magnificent court.

The days of Jesuit rule were over, for the king, though a devout son of the church, was ever exceedingly jealous of the attempts of the order to encroach on the things belonging to Cæsar. The king was determined that New France should be, that it should increase and grow strong. The most powerful monarch in Europe, possessed of vast revenues and despotic authority, imperious, energetic and clear-sighted, knowing men well, had made this a favorite project, and for years spared no effort to carry it out. He failed, and his failure may be instructive to Americans. "Autocracy and democracy," says the author in his preface, "often touch hands, at least in their vices."

Great changes now took place, which seemed to promise well for Canada. A Lieutenant-General of America, the Marquis de Tracy, a Governor of Canada, Courcelle, and a royal intendant, Talon, were sent out, and with them the first regiment of regular troops that had ever been seen in Canada. Tracy's arrival at Quebec, with a numerous band of followers, and all the pomp and ceremony of the occasion, are described in Mr. Parkman's picturesque narration. It was a day of rejoicing for all Canada, and the colonists were especially gladdened as they gazed on the bronzed faces of the regiment, Carignan Salières, whose last service had been against the Turks, and who now were to fight the Iroquois.

A vigorous campaign against the Mohawks was instituted, conducted by Tracy in person, despite his advanced age. It was completely successful: the Mohawks fled before the French, and five of their walled towns were captured and burned. Never before had they met with so humiliating a disaster. From their greatest danger, the hostility of the Iroquois, the French were relieved for nearly twenty years.

Civil matters now claimed attention. The system of government was radically bad and worse administered, but the much needed reforms were not applied. Oppressive monopolies flourished with new vigor. The most absurd laws, or rather decrees of the King, were constantly made, and what was even worse, constantly changed, respecting trade, commerce, religion, and everything else about which a decree could be made; and the example was followed by the lesser powers in their degree. A royal edict fixed the price of beaver, gave a monopoly of the trade to one person or company, and ordered that all which were offered should be received. The Intendant issued an order forbidding quarreling in church, and the Council of Quebec decreed that the bakers should make white bread, light brown bread, and dark brown bread. Religious intolerance reached even a higher pitch than in France. A Huguenot could trade only under strict restraint in Canada, and could not remain over winter without a license. "Heresy was scoured out of the Colony." Not a gleam of popular rights, it need scarcely be said, anywhere appears.

Meantime the King was not stinted in his efforts. Emigrants, cattle, horses, tools, etc., were sent over in quantities. Land was given to those who would settle on it. Young girls were sent out as wives for the colonists; bounties were given to those who married young, and to those who had children; the more children the larger the bounty. To those who were needy help was afforded, and this class was a numerous one. Among other things brought over at this epoch was the order of nobility, and all Canada went mad after titles. Successive Governors ennobled various prominent colonists, who held their heads high in consequence and were in their turn looked down on by those who had brought their titles with them from France. Of course no noble could work without degradation; and as most of them had no property except land, they had no resource but to beg of the government, which they did most clamorously.

So great was the evil of beggarly nobles that one governor after another is found beseeching the King to send no more patents of nobility. "I would much rather see a good peasant." "As soon as a colonist gets a title he becomes good for nothing," they say.

Still the poverty of the nobles ought to be relieved. The King did so very liberally. Evidently Canada was no place for nobles. Other objects demanded the royal aid; not a new industrial or commercial enterprise of any sort could be set on foot without help from the King, and though it was constantly given, scarcely anything succeeded, fisheries, West India trade, or manufactures, which last seem scarcely to have existed. Among the other evils of bad government the Canadians suffered from an irredeemable paper currency, which in various forms afflicted them from 1685 down to the English conquest in 1763. We, in this day and country, might learn something from what befel them in this respect.

One cannot but think the great want of the colony was to be let alone. It was like a young forest tree planted against a wall, and fastened to it, trimmed into shape, every branch stretched out straight, and every healthy offshoot lopped off.

But there was one result of bad government, perhaps worse than any yet mentioned, which drained the very life-blood of the colony. Shut out from respectable pursuits, many of the most energetic and intelligent of the young men quitted the settlements, and became *Coureurs de bois*, and were ever afterwards unfit for civilized society. Out of a population of less than 10,000 in 1881, they were estimated at 800. The severest edicts were issued by the King against them, but to no avail.

Ancient enmity and religious hostility are assigned as the causes why the French in Canada held aloof from the English colonists in their struggle for independence. Another quite as powerful may be found in the fact that the English government, though that of a foreign and a conquering race, was by far the best they had ever known. To them the grievances of the free born Britons over the border must have seemed absurd. "Taxation without representation!" The former was inevitable, that they knew; and how could the latter, of which they knew nothing, affect the matter?

In their generation they were wise: France showed what wild

work those who have never known anything but despotism will make of self government.

Of morals, manners, and institutions, of the ecclesiastical element, the industry and trade, the physical aspects of French Canada, Mr. Parkman says much, well deserving a more extended comment. "We can judge of the conception of humanity which prevailed, from the fact that the Indian allies of the French were allowed, in more than one instance, to burn their Iroquois prisoners publicly at Quebec, with all the savage ceremonies usual on such occasions. Neither the civil nor the ecclesiastical authorities saw fit to interfere. Possibly they regarded it as an *auto da fe*."

One chapter gives an interesting account of the adaptation of the feudal tenure of land to the condition of a new country. It seems to have been one of the few institutions brought from France shorn of its obnoxious features, and to have supplied a simple and convenient method of parcelling out lands among the settlers.

With his usual clear-sighted impartiality, Mr. Parkman does full justice to the Jesuits. Their earnest zeal and devotion in carrying the cross among the savage Iroquois, the unshaken courage and endurance with which they underwent hardships and suffering of all sorts, even the torture of the stake and death, stand in strange contrast to their profound dissimulation and insincerity, their indifference to means, providing the end was attained, their arrogant control in civil affairs, and their insolent interference in families. A striking instance of this last is the admonition which Bishop St. Vallier saw fit to give a newly arrived Governor, Denonville, as to the conduct of himself, his wife, and his daughter. They are desired to accept no invitation to suppers, that is, late dinners; to express their dissatisfaction, and *refuse to come again* if too sumptuously entertained. As regards the young lady, the bishop seems to have thought it needful to be very stringent in disapproving of dancing, (except with those of her own sex and in presence of her mother,) private theatricals, and the luxury of dress, which last sin he illustrated by the awful warning of the Lady Pretextata, who, St. Jerome informs us, had her hands withered, died five months afterwards, and went to hell, "as God had threatened her by an angel, because by order of her husband she had curled the

hair of her niece, and attired her after a worldly fashion." Some of the "good little boy" book writers of a later day must have taken the bishop as a model. The Governor was not the only one thus favored. We find the Jesuit preachers denouncing the love of dress, amusements, etc., in language that would have sounded not amiss in the mouths of their Puritan cotemporaries in New England, whom they further resembled in their rigid rule over the manners of the colony. So similar are the manifestations of religious austerity, whatever its creed. Between the Jesuits and the other religious orders in the colony, notably the Sulpicians, who were established at Montreal, and the Recollects, existed a bitter enmity. It is very amusing to observe the incredulity of either party in regard to the miracles announced by the other. Miracles were of constant occurrence, and generally puerile and absurd in the extreme; such as that related of a certain priest, whose head, after the Indians who killed him had cut it off, remained alive for a long time abusing them most roundly. They seem to have been readily received, and it is hardly necessary to say that gross superstition was prevalent. An object of universal reverence was Jeanne Le Ber, who at an early age consecrated herself to heaven by shutting herself up in her chamber for ten years, seeing no one. She came forth but once, for a few moments, when her brother was brought home dead. This did not satisfy her, and with a desire for greater sanctity, she had built for herself a cell behind the altar in one of the churches, in which she remained for twenty years, lying on a bed of straw, never moved, "wrapped in a garment of coarse gray serge, worn, tattered and unwashed." Neither to the dying bed of father or mother would she come forth. After all this we are perhaps not surprised to learn that she was "commonly in a state of profound depression," "and what her biographer calls "complete spiritual aridity." St. Simeon Stylites would have blushed at his own unworthiness on beholding her. That she should have worked miracles was of course. An English fleet was shipwrecked in consequence of her prayers, "the greatest miracle since the days of Moses," says her biographer.

Happily for the community, the religious enthusiasm of other women found a better vent in works of mercy and charity. Especially were the hospital nuns of Montreal and Quebec remarka-

ble for that noble and unselfish devotion to suffering humanity found so often among the female religious orders of the Roman Church in all ages and climes.

No chapter of the book excels in interest the final one. In it the author contrasts clearly and powerfully the English and French colonies in North America, and sets forth the causes why the former grew up in neglect into a great and mighty State, while the latter, despite all that was done to prosper it, languished devoid of all vital force, till it fell beneath English arms.

"The cause lies chiefly," he says, "in the vast advantage drawn by England from the historical training of her people in habits of reflection, forecast, industry and self-reliance—a training which enabled them to adopt and maintain an invigorating system of self-rule, totally inapplicable to their rivals."

Admitting that the French colonists were incapable of self-government, it by no means follows that their condition would not have been vastly better under a more enlightened government than any they had prior to the English Conquest in 1763. An improvement then began which has steadily continued since.

In arbitrary, absurd and still worse, constantly changing laws, administered by officers corrupt from high to low; in grinding monopolies of all sorts, which put fetters on trade and industry; in a bigoted and domineering priesthood, which exercised inquisitorial power over the lives and actions of those under their control, and made their influence constantly felt in civil matters, there is enough to crush out the life and paralyze the efforts of any community, of any race of men.

It may indeed be doubted if Anglo-Saxons would have endured such a rule: certainly they could not have flourished under it.

Mr. Parkman's style is not inferior to his matter. Graphic, clear, and condensed, it unrolls before us the series of events, and carries us on with unflagging interest. He is particularly happy in his delineation of character and persons, while he has also the faculty of enabling his readers to share in his keen appreciation of the picturesque in nature, and in man and his surroundings. His description of Tracy's landing at Quebec, and the capture of Mohawk Town, are instances in point.

Sometimes, indeed, there is a superabundance of description of scenery. In describing the labors of a Canadian curé, he puts

the reader on board a ship, "the last of the season," sailing up the St. Lawrence, in order that in the midst of the solitude he may meet Father Morel traveling in a canoe to visit his charge. At the close of one of the final chapters, he suggests that "winter draws near," etc., and again embarks the reader, this time with himself, on a ship bound for Rochelle, and before its towers rise in sight "there will be time to smoke many a pipe, and ponder what we have seen on the banks of the St. Lawrence." Ungracious as it may seem to comment on a rare blemish, we must remonstrate when we hear of a ship "swelling her sails" (p. 340), nor is it very clear how in an earthquake men could have "stared aghast at a large hill, covered with trees, which sank into the water before their eyes" (p. 127).

"And now, we too will leave Canada."

NEW BOOKS.

MASTER-PIECES IN ENGLISH LITERATURE and LESSONS in the English Language, with a brief statement of the Genealogy of the Language, Biographical Sketches, Explanatory Notes, Suggestions for Expressive Reading, Methods of Analysis, etc. Designed for use in colleges and schools. By Homer B. Sprague, Principal of the Adelphi Academy in Brooklyn, and late Professor of Rhetoric in Cornell University. In four volumes. Vol. I. Pp. 437. Royal 8vo. New York: J. W. Schermerhorn & Co.

The philological study of the English language and its literature as a branch of education may be said to have begun in our own times. It has advanced far more rapidly in England than in America; the excellent editions of English classics that have issued from the Clarendon press have done much to facilitate it, and it now holds a prominent place in English schools and colleges, as the complement of a classical education, or more frequently as the substitute for it.

Its advantages need hardly be dwelt upon. It furnishes an excellent corrective to the one-sided tendency that would drive out of our schools everything but what is "practical," and would replace all other branches by the various sciences. Now science does furnish a quota to liberal culture, but a very small one. It gives a series of elementary lessons in the art of observation, the

cross-questioning of facts, and the searching for the real under the apparent. But this can never go very far, because the real discipline of science is not open to the mere student, but only to the original investigator. The man who faces problems yet unsolved, and solves them, learns the patience, the modesty, the carefulness and the nice judgment of the true scientist in reaching the right solution. But the mere student, who is crammed and stuffed with the results of this work, and knows in practice little or nothing of its methods, gets very little mental discipline from it. On the other hand, every study of a work of literary art, if wisely directed, brings into play the very faculties of patience, humility and discrimination that the scientist is using. It throws the student into the closest contact and sympathy with a great origina-tive intellect, and with the results that always flow from that contact. Especially it exercises the judgment or understanding, the faculty that discriminates between two probabilities in favor of the more probable—just as the pure mathematics exercise the reason—the faculty that grasps the absolute and unquestionable truths of intuition.

The English readers, beginning with Lindley Murray's, were a first step towards this study, but little more. Nothing less than a literary whole is capable of the literary study that is here proposed. The feminine criticism that judges a book from a few "beautiful passages," is now seen to be utterly insufficient and out of date. The old commentators on Shakespeare and on the Greek and Latin classics, are full of it, but since Coleridge and Schlegel that fashion is out of date. A book, a poem, a play, is an organic unity; to tear it into pieces and present but one or several of these *disjecti membra poetæ* for judgment, is to ignore the very first law of all art. For this reason Matthew Arnold has published in the form of a school-book (with introduction and notes) the last twenty-six chapters of the Prophecy of Isaiah, which many critics regard as the independent work of a prophet who lived during the Captivity. He took it as a work of literary art complete in itself, intelligible to school children, and worthy of the most careful study. His object was to promote the study of "letters" in England, and to counteract the tendency to an exclusive study of science.

Mr. Sprague's book is meant to serve the same general purpose, and differs from the English works of the same sort chiefly in two respects: (1) It collects several works into one volume, instead of publishing each separately. The present volume, a fourth of the whole collection, contains selected works of six great English authors—Chaucer's "Clerk's Tale," Spenser's "Epithalamium," six of Bacon's "Essays," Shakespeare's "Macbeth," Milton's "Areopagitica," "Ode on the Nativity" and "Comus," and Bunyan's "Pilgrim's Progress, Part First." Each of these is

furnished with all the usual apparatus, historical, critical and exegetical. The selection we think most excellent. Except the "Advancement of Learning," the first book of Hooker's "Ecclesiastical Polity," and the first book of "The Faery Queen," we know of nothing that compares with the works given in representing the literary greatness of the age that ends with Bunyan. The historical part of the apparatus leaves almost nothing to be desired. The critical part is not as full as we could wish. Mr. Sprague has here generally confined himself to quotations from great authorities, but he might have quoted more fully. The exegetical notes are excellent, but they do not go far enough. In Spenser's "Epithalamium," for instance, the allusions to the Song of Solomon and other places in the Old Testament should have been pointed out; the sense of "discolored" in the third stanza, and of "descant" in the fifth, should have been marked, and the allusions to marriage superstitions explained.

(2) Mr. Sprague supplements the literary and philological part of his work by abundant instructions in elocution and in composition, with a view to the employment of the book as a reader in schools. Chapters on enunciation and on the construction of sentences are intercalated in several places, and notes giving directions to readers are printed at the foot of the page, under those that give explanations of words and phrases. These seem to be based on a large experience and a thoughtful study of rhetoric in all its branches, and will probably be of great use in promoting the least cultivated of literary arts, the art of reading. If we would notice any defect in them, it is the omission of an emphatic statement of the difference between singing and reading, which is the more necessary, as the former is the only form of artistic utterance that is generally and thoroughly cultivated, and is therefore continually and unconsciously carried into reading and speaking. This is seen in the feminine palatal enunciation of many speakers, by which the force of every *vowel* is distinctly given, and that of the consonants by the lips and teeth subordinated. It is also seen in the tendency to let the voice fall into a sort of melody—swinging on from clause to clause and from word to word in a sort of vocal curve, which is indeed the easiest line of vocal movement, but is not the line of natural enunciation. It is seen also in the tendency, borrowed from psalm-tunes, to let the voice fall at the end of a sentence. All these mistakes are indeed indirectly reproofed by Mr. Sprague, but they need direct reproof also.

The mechanical execution of the book is worthy of all praise.

THOUGHTS ON REVELATION, with Special Reference to the Present Time. By John M'Leod Campbell, author of "The Nature of the Atonement." Crown 8 vo. Pp. 200. Philadelphia: Claxton, Remsen & Haffelfinger.

Nearly half a century ago Mr. Campbell was the minister of the parish of Row in Dumbartonshire, the neighbor and congenial friend of Rev. Robert Story of Roseneath. These two, with two other ministers, Edward Irving, of London, and David Scott (later of Manchester), and a layman, Thomas Erskine, of Linlathen, fell under the suspicion of heresy with the powers of the Church of Scotland, for preaching that all men are actually redeemed by the death of Christ, and that Christians differ from others simply in being brought to the knowledge and confession of the fact. Mr. Campbell was singled out as the worst offender, and the belief took the name of the Row Heresy. The end was his exclusion, and that of Scott and Irving, from the church, while Story was passed by, although he had on all occasions openly defended his brethren as sound in the faith. Erskine, Campbell and Row found a home in the Church of England; the seed that was rejected from Scottish soil bore fruit on English. To their teaching is largely due the existence of the Broad Church of Maurice and Kingsley, as a theological school, for in the hands of Hare and Arnold it promised to be no more than a school of philosophy, with a liberal political and ecclesiastical policy. And now the rejected seed goes back to Scotland, in the books and the influence of Maurice, Kingsley, Robertson, Llewellyn Davies, Stanley, and a host of others; of the young ministers of the Kirk, and in a less degree of the unestablished Presbyterian bodies, a large part are of the Broad-church school.

Mr. Campbell's chief book is his work on the Atonement, whose burden it is that God needs not to be reconciled to man, but only man to be reconciled to God. The present book is meant to meet the modern difficulties as to the reality and truth of a divine revelation, and to show that faith in it rests neither upon a blind following of inherited tradition, nor upon the sufficiency and validity of external proofs. In the author's view every revelation or *apokalupsis* must evidence itself to the heart, and the conscience as being such, as actually disclosing and unveiling what had been hid in the shadow or the dark. If the Bible is a light, it must prove the fact by giving light; and when once it has done so, and the man who sought light from it has got light; then no arguments to prove that there is no light in it will ever upset his faith in it.

Mr. M'Leod connects light and life very closely. He maintains that the spirit of God is daily at work among men imparting a new life to them, and that the questions raised by the possession of that life lead them naturally to the book which contains the full disclosure of the nature and the spirit of the life that He

imparts. Not that he confines inspiration to the Bible, but he claims that human experience vindicates for that book, or that collection of books, the central and palmary place among books. What is elsewhere of light and truth, he holds will be found here in its pureness and fulness. For here is the record of the cardinal events in the race's spiritual history—the unveiling of the divine fulness of life in the person of the Son of man, unto whose likeness the spirit is renewing men.

These "thoughts" do not, therefore, like the books of Paley and his school, offer us a set of logical arguments for the truth of divine revelation, which are good and valid for any mood and temper of mind. Such arguments, in Mr. Campbell's view, carry with them their own condemnation. But on the other hand Mr. Campbell aims at giving a *rationale* of divine revelation, such as shall be valid for every mind in its best and highest moments—the moments when it is most in harmony with that renewal unto spiritual life, which the Spirit that speaks in the Bible is seeking to work in every man. He aims to set forth the true idea of the subject, to divest it of all notional excrescences, and to show how needless are some of the difficulties that have gathered around the central question.

AN EXAMINATION OF THE ALLEGED DISCREPANCIES OF THE BIBLE.

By Rev. John W. Haley, M. A. With an Introduction by Alvah Hooly, D. D. Pp. xii. 473, 8vo. Andover: Warren F. Draper. Boston: Estes & Lauriat.

This book, though occupied with the same general subject as Mr. Campbell's, stands at the very poles' distance from it in method. Mr. Haley aims at the reply to objections to details of the Bible teaching and history.

It will seem to most readers that a great many of the cases of discrepancies here discussed might well have been omitted. They are of such a nature that any person of average honesty and intelligence will at once dismiss them as frivolous. Mr. Haley indeed says that he has actually found every one of them alleged in pamphlets and books; and, indeed, when a man sets himself to see how many discrepancies he can find in any document, he will catch at very slight things in order to swell out his list. But the length of the list will have no weight with those who read it in detail and find that many of the cases quoted are good for nothing. Rather, the presence of these will with most people weaken the force of all the rest.

A graver fault is the very evident lack of "the historical sense" in the treatment of the subject. Theologians have so long treated the Bible as a mere armory of proof-texts, that they have displaced from their own minds, and those of many of their critics, the fact

that the Bible is a collection of works that reach, according to ordinary computation, over sixteen hundred years of the world's history, and belong to very different periods of moral culture. It is not, like the Koran, a law-book, given once for all and complete in the utterance of a single writer. It does not, like the Koran and almost every other religious code, teach oracularly and dogmatically. It teaches by example and experience, by a grand series of object lessons. The prophet, for instance, is not a mere mouth-piece for a divine afflatus. His inspiration is a life-long education; his book is the record of the process as well as its results—of the all but blasphemous words into which he broke out in the hour of his bitterness, as well as of the triumphant songs of his hours of hope and good cheer. To turn such a series of books into a Koran, a mere heap of dogmas and proof-texts, is to lay it open to the charge of infinite discrepancies. And something like that is the treatment by which the great body of divines have shown their reverence for the book. That is certainly the prevailing popular conception of it, which gives so much weight to trifling objections. When our notion of the old book is less wooden, mechanical and artificial—when we have learned to enter into its humanities—there will be less need for such books as this. Yet this book may be well enough in its place, and do good service by meeting many half-taught critics on their own ground and giving them such an answer as the case admits.

Mr. Haley has made a wide study of the literature of the subject, and gives a long list of books on it that preceded his own. He has also made use of some of the best commentaries. In one case at least (page 413), he gives explanation of an inconsistency with a spurious verse (Matthew xii. 40), which admits of no explanation whatever, save the thickness of the head of the scribe who first wrote that gloss on the margin for a thicker head to copy into the text.

CONCHOLOGIA CESTRICA. The Molluscous Animals and their Shells, of Chester county, Pa. By Wm. D. Hartman, M. D., and Ezra Michener, M. D. Philadelphia: Claxton, Remsen & Haffelfinger.

An exceedingly useful little work, designed for local collectors of terrestrial and fluviatile mollusks, but nearly as well adapted for all the Eastern and Middle Atlantic States as for the restricted territory whereof it treats. A few introductory pages and a glossary afford primary information to the unlearned reader, and the generic and specific descriptions throughout are very characteristic and comprehensible. Most of the illustrations (of which there are over two hundred) are excellent wood-engravings: a notable exception is Fig. 133, which is intended to represent *Physa lata*, Tryon, but does not resemble any species of the genus. As to the

species itself, we doubt whether it is distinct from *Ph. heterostropha*. Young naturalists are prone to multiply species without sufficient grounds for describing them: we doubt whether Mr. Tryon's more mature judgment sanctions this species of his earlier conchological labors.

The collection and identification of over one hundred species of shell-fish inhabiting within the limits of a single county of the State of Pennsylvania, evidences rare perseverance and exhaustive research, and the well-known naturalists who have furnished this record of their labors, have thereby conferred substantial benefit upon those who are interested in the pursuit of one of the most interesting of the natural sciences.

HAZEL BLOSSOMS. By John Greenleaf Whittier. Pp. 133, 16mo. Boston: James R. Osgood & Co.

AMONG THE TREES. By William Cullen Bryant. Illustrated from designs by Jervis McEntee. Pp. 39, square 8vo. New York: G. P. Putnam's Sons.

The season has not been rich in expensive and illustrated books, for reasons that are only too obvious to need statement; but here are two that come welcome as Christmas.

Mr. Whittier fulfills the promise of the Psalmist, "that the righteous shall flourish like the palm-tree."

And in old age, when others fade,
They fruit still forth shall bring;
They shall be fat, and full of sap,
And aye be flourishing.

(We quote the version of the valiant old Puritan and mystic, Francis Rous, which has the sanction of such poets and critics as Campbell, Scott, and Carlyle.) The fruit of this friendly spirit is indeed tenderer in texture and milder in flavor, as his years grow upon him. The volume takes its name from a poem, which likens the poet's work to that of the hazel-wand, which discloses springs and mines underlying the dry and seemingly barren surface. And such, indeed, has been Mr. Whittier's function. He has glorified life, American life, by leading to the deep well-springs of humanity that underlie its seeming sordidness. Other poems are Agassiz's Prayer, The Friend's Burial, and John Underhill. A few are from the pen of his gifted, though less gifted, sister Elizabeth, and are characterized by a womanly delicacy, if they are without the masculine strength of her brother's work.

The second book of the two is more remarkable for its pictures than its text, Mr. Bryant's poem being already before the public. Here also we have an American poet discharging the poet's true functions—contributing to the glory of his native land. But Mr. Bryant approaches the subject from quite a different side. He is

the poet of Nature, in her American aspects, almost exclusively. He writes never so well as when his theme is the gigantic yet hardly picturesque features of American scenery. His "Among the Trees" furnishes a fine subject for the pencil of an American artist, and we think that Mr. McEntee has done it ample justice. He has caught the very air and atmosphere of the American woods, and reproduced it in these engravings, which occupy a part of every page. Unless we are much mistaken, his work will be as welcome in Europe as at home, for its faithful presentation of our forest scenery. If we have any fault to find, it is with the rather conventional and indistinct treatment of foliage. We have a Preraphaelite fondness for knowing what kind of a tree we are looking at.

THE STORY OF A HOUSE. Translated from the French of Viollet-le-Duc. By George M. Towle. Illustrated by the Author. Pp. 284. Boston: James R. Osgood & Co. 1874.

It is so seldom that an architectural book is written for the general public, that we welcome the more heartily this effort to give the non-professional world some ideas of the art of correct building. M. Viollet-le-Duc's style is so clear that every one who reads can understand even the more technical parts of the book, and we have no doubt that "The Story of a House" will be extensively read and enjoyed, and will effect as much for the cause of careful designing and substantial building as did Mr. Eastlake's "Household Taste" to refine the interiors of our houses.

The *dramatis personæ* of the Story of a House are few in number, and the incidents of the story very slight.

M. and Mme. de Gandelau, who are the great people of their neighborhood (Berri), and live in an old château, determine to build a house for their recently married daughter, Mme. Marie N——, during the year which she expects to spend away from home.

Paul, the son of the house, a lad of sixteen, is at home for his vacation, and is filled with the desire to design the new house. M. de Gandelau therefore pretends to telegraph to Madame Marie as follows: "Paul wishes to build house here for Marie. Send programme;" and he presents the unsuspecting Paul with the following reply, carefully composed by himself: "From Baveno. Arrived this morning. All well. Paul has excellent idea. On ground-floor, vestibule, drawing-room, dining-room, office, kitchen not underground, billiard-room, study. First floor, two large chambers, two toilet cabinets, baths; small chamber, toilet-closet; laundry, wardrobes; chambers, plenty of cupboards; staircase safe from neck-breaking. Marie N——."

Paul finds it a very difficult matter to provide for these require-

ments in a plan ; but, fortunately, his cousin Eugene, a Paris architect, arrives opportunely, and the rest of the book shows how, with the assistance of his knowledge and experience, all the requirements of the programme are fulfilled, and how the new château is reared in accordance with the true principles of architecture.

Paul's first sketch is at once shown to his cousin, whose comments upon it are excellent. "Softly," he says to the impatient Paul, who wishes to begin work at once, "this is nothing but a sketch. And how about the definite plans, the estimates, the details of execution? We must proceed with order. You must know, Paul, that the more anxious one is to build quickly, the more useful it is to decide upon every small detail beforehand. Call to mind the weariness of your cousin, Count de —, who has resumed building his château every spring for six years, without having been able to finish it ; because he did not in the first place set down all that he wished to do, and his architect has not ventured to adopt, once for all, a well-digested plan. He has lent himself to all sorts of caprices, or rather to all the officious pieces of advice which his friends have tendered—one about the size of the rooms, another about the position of the staircase, and a third about the style and decoration. We have only a year before us, and so we must only begin when we have become sure of not making false steps."

As an all-important preliminary, the cousins view the proposed site of the new château, and Eugene discourses upon the necessity of giving certain rooms certain exposures, and, generally, upon the proper planning of the house. We confess that we are somewhat disappointed with a part of the ground-floor plan. The study has, to our mind, several disadvantages : in the first place, suppose the writing table to be placed in front of the fire, one has right-hand light, which of course casts a shadow on one's paper ; in addition to this the door opening into the billiard-room will always be a source of annoyance to the occupant of the study on account of the noise, and because it will enable people to open the door at his back and retire without speaking, but not without disturbing him, if he is reading or writing at the time. The dining-room bay-window has a cubby hole on one side, "which would enable the dishes to be passed through from the servants' pantry, and a sideboard or table to be placed there for carving," which reminds one of the box-office at a theatre, and shows us that, in this one instance at least, they do not do these things better in France. The other arrangements of the plans seem to us perfect and worthy of the cleverness of their author. The bed-room accommodations are excellent, although we fear some of the passages would be dark. Under the careful instruction of his cousin, Paul's architectural ideas grow so rapidly that

he begins to criticise and express to his father his disapproval of the old château. His father's reply is admirable, and displays clearly the veneration which fills our archæologist author. "Paul," he says, "this house pleases your mother, and such as it is, it pleases me also. You and your sisters were born in it. I inherited it from my father, and I have made only such additions to it as were necessary. There is not a corner of this house which does not recall to me some happiness or sadness; it is consecrated by the work of three honorable generations. All the people of the country roundabout, who call it the "château," know that they find here bread when they are in want of it, clothing for their children, advice in their differences, and aid when they are ill. They have no need to be told where the staircase is, which leads to your mother's room, or to my study; for they know it as well as we do. . . . If the kitchen is at some distance from the dining-room, it is large enough to hold the harvesters when they repair hither for their supper, and the shepherds when they come to settle their accounts. . . . What has become familiar to the eyes must not be disregarded; the country people unite in their thoughts the proprietor and his house; change the latter, and they would no longer recognise the former. . . . When you have studied long and seen much, you will find that the dwelling ought to be, for a man or his family, a garment made to his measure; and that when a dwelling is in perfect accordance with the manners and habits of those who are sheltered beneath its roof, it is excellent."

Papa Branchu, an old mason and builder of the neighborhood, is called upon to carry out practically the plans. Those who are familiar with recent discussions in English periodicals on the prospects of architecture, will remember that the ordinary workman is the man to whom we are constantly told to look for improvements in our styles and our systems of construction. In the Middle Ages the most noble buildings were designed and erected by architects who were simple workmen—the leaders of roving bands of masons. But M. Viollet-le-Duc is apparently not a fervent believer in the unlimited powers of the workingman, and keeps Papa Branchu well in his proper place.

While the house is building, M. Durosay, a friend of the family, arrives, and criticises the work. "The new-comer had read and traveled much, knew a little of everything, belonged to several learned societies, and his opinion was greatly respected in his own neighborhood. . . . He had built houses, and as it seemed to him that architects were quite unfit to practice the art of construction, being expensive and imbued with prejudices, he had himself taken charge of the building operations; making his own contracts, treating directly with suppliers, giving the plans, and supervising the works. This fancy had cost him very dear, and one

fine day his buildings fell down.....If any one came to him to consult on any matter just as he was about to take a train, he would rather let the train go than not to give his decision on it at length."

M. Durosay examines the plans, and politely, but candidly, makes his suggestions and objections. The house seems to him too much shut in for a country house: he would like to see a portico, or at least a large veranda, with the windows more open, and "the expression more perceptive of the exterior life." He suggests the villas of northern Italy as excellent models, with their porticos, terraces, their large open halls, and their bay-windows looking out upon the country. All these, he says, have a noble aspect, elevate life, one might say, and enlarge narrow ideas. He objects also to the glaring want of symmetry on one of the fronts.

M. de Gandelau explains that he does not propose to leave a work of art to his daughter, but only a good, solid, convenient house. "I see," says M. Durosay, after a pause, "that you adhere to your taste for what you call the practical side of things. Yet what a good chance this is to give your daughter one of those mansions which, without neglecting the material comforts of life, possess that perfume of art which is too seldom found in our country districts. A little exterior elegance is a powerful charm, which leaves an indelible impression on the mind. It is thus that the Italians preserve the poetry of the brilliant eras of their civilization. They know how at need to sacrifice a part of what we call 'comfort,' of the necessities of the material life, in order to preserve among them these beautiful traditions of high art."

M. Durosay's criticism of the design is very amusing, but M. de Gandelau gets much the better of the argument. Paul asks, soon after, what architecture is, and his cousin answers him very happily. The chapter on Theoretical Studies gives us a very clear idea of the distinction between the genuine columnar architecture of the Greeks, and the pseudo-architecture of the Romans. The dissertations on the timber work, mouldings, joinery, smoky chimneys, and on the proper employment of the various materials, are all interesting.

Throughout the book the illustrations are very clear, being for the most part drawn in perspective, so that one is not confused by elevations, but sees exactly how everything would look.

Mr. Towle's translation is very satisfactory, but we regret that he did not give us in feet and inches the dimensions of rooms, etc., which we fear most readers will not work out from the metres. We are sorry also that we are not told anything of the finishing of the house, which occurs while Paul is at school. We should like to have followed the wainscoting, the painted decorations, the wooden mantels, and the curtain hangings, but we certainly are more than satisfied with what we have.

TABLES FOR THE DETERMINATION OF MINERALS, by those Physical Properties ascertainable by the aid of such Simple Instruments as every Student in the field should have with him. Translated from the German of *Weisbach*. Enlarged and furnished with a set of Mineral Formulas, a Column of Specific Gravities, and one of the Characteristic Blowpipe Reactions. By *Persifor Frazer, Jr., A. M.*, Assistant Geologist of the Second Geological Survey of Pennsylvania, lately Professor of Chemistry in the University of Penna., etc. Philadelphia: J. B. Lippincott & Co. 1875.

A tabular treatise, like the one announced under the above title, has ever to be looked at as the result of a vast amount of work, even as a translation. In fact, the scarcity of such works in the scientific literature, can only be accounted for by the reluctance of eminently capable men to devote their time and labor to a work which, however valuable to the student, yet by its very nature is deprived of originality. The scientific student cannot but look, therefore, except with the sense of deepest gratitude, upon the author of a correct guide of this class. Countless hours of tedious searching in voluminous hand-books are saved to him during his application to the determinative part of his science.

In mineralogy, more than perhaps in any other descriptive science, opinions are at variance as to which are the most characteristic features of the species; and, consequently, which of them ought to be used in determinative tables as the cardinal points of classification: whether external or physical properties, whether internal or chemical properties. In the tables of *Weisbach*, which Professor Frazer presents now to the American student of mineralogy, the physical properties have been given the preference, and we feel happy to concur with the author's arguments in favor of this selection as given in his preface. We know fully well from our own experience, that these properties, if well examined, lead in the largest number of cases to a correct determination of the mineral. But we regret that not more attention has been paid to the *form* of mineral individuals—to crystallography. The goniometer is one of those simple instruments, undoubtedly, which the student in the field ought to carry with him.

No better practice can be devised for the training of the eye than the discrimination between angles of various sizes. We will cite as an example, the two species of *amphibole* and *pyroxene*. Of the latter our tables say (page 92), *crystal system*: monoclinic; *cleavage*: I. indistinct. Of *amphibole* (Hornblende) the tables say *crystal system*: monoclinic; *cleavage*: I. distinct. On comparison of the remaining columns, it will be found that all other characteristics of the two minerals are identical. How are they to be identified, then? By the most simple means. The cleavage of common *pyroxene* or *augite* is not at all so very indistinct, but it

shows in 99 cases a distinct cleavage prism with an angle of 87° , and the common hornblende shows an equally distinct cleavage prism with an angle of 124° . This is so striking, indeed, that a moderately good eye will never confound the two species after having once become aware of this peculiarity. We might easily multiply such cases, but deem it sufficient to call the translator's attention to the fact, and trust to meet in the crystallographic column of the next edition, with all fundamental prismatic, pyramidal and rhombohedral angles. Blum's *Lehrbuch der Oryktognosie* contains at the end an enumeration of all minerals which can easily be determined by the principal angles in all the systems; and there is an astonishingly large number of them.

The introduction, by the translator, of a column of chemical formulas into the plan of the work, must be hailed as a fortunate enrichment. In as much as a mineral is nothing else but a chemical product made in nature's great laboratory, but otherwise identical with the salts produced by the chemist, it is evident that a representation of the chemical nature is absolutely necessary, even if it does not assist in the recognition of the species. It must, however, be borne in the student's mind, that a chemical formula has no absolute value, but serves merely as a relative means of comparison with other compounds, and that, therefore, the simplest expression is also the best. We admire the translator's patience in conforming the very diverging results of mineral analyses to the most advanced views on theoretical constitution, but we cannot esteem it a benefit to the student of mineralogy, and would have preferred to see simple empirical formulas in the tables.

It is also to be regretted that a number of errors have slipped into the text by the carelessness of the printer, and which may prove very annoying to the beginners. We read on page 98, for example, under the blowpipe reactions for *boracite*: Mixed with CaO and heated on charcoal gives flame deep blue color. It should read CuO . For any one knowing the reaction with copper on chlorides, no mention of the reaction would be required, but a beginner may blow himself black in the face with calcium oxyde, in trying to obtain a blue color of the flame.

We wish heartily, in conclusion, that the book, in its neat and handy form, may find its way into the work-bag of every student of mineralogy, mining engineer and field geologist, because in our estimation it fills a void which so far has existed in American scientific literature.

G. A. K.

"We notice that the species of mineral that are peculiarly American are mostly omitted, and many of the recently described foreign species; the addition of these will give interested value to another edition."—*Silliman's Journal*.

BOOKS RECEIVED.

Malcolm. A Romance by George MacDonald. Paper cover, Crown octavo, Pp. 280. Price \$1.00. Philadelphia: J. B. Lippincott & Co

The Man in the Moon, and other People. By R. W. Raymond. Beautifully illustrated, 12 mo., gilt edge. Pp. 347. Price \$2 00. New York: J. B. Ford & Co. Philadelphia: J. B. Lippincott & Co.

Fair Maid of Perth. Also, The Bride of Lammermoor. By Sir Walter Scott. Peterson's cheap edition for the Million. Price 25 cents each. T. B. Peterson & Bro., Chestnut Street, Philadelphia.

Checkmate. By J. S. Le Fanu. Author's illustrated edition. Pp. 181. Price 75 cents. Boston: Estes & Lauriat. Philadelphia: Porter & Costes.

Too Much Alone. By Mrs. J. H. Riddell, Pp. 170 Price 75 cents. Boston: Estes & Lauriat. Philadelphia: Porter & Coates.

Bulletin de L'Académie Royale des Sciences, des Lettres et des Beaux Arts de Belgique. 43^e année, 2^e série, tome 38. Nos. 9 and 10. Bruxelles: F. Hayez. Imprimeur de L'Académie Royale, 1874.

Philosophic Reviews, Darwin Answered: or, Evolution a Myth. Geometrical Dissertation, Notes on Definitions. By Lawrence S. Benson. New York: Jas. S. Burton, 149 Grand Street, 1875.

Half-hour Recreations in Natural History. Division first. Half-hours With Insects. Twelve parts. Part V. Pp. 32. Price 25 cents. Insects of the Pond and Stream. By Asa S. Packard, jr., Boston: Estes & Lauriat. Philadelphia: Claxton, Remsen & Haffelfinger.

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THE MONTH.

THE withdrawal of Mr. Gladstone from the leadership of the Liberal Party in England is an important event in every point of view. It has been rumored for some time past that it was his intention to take this step, but no amount of warning or preparation could prepare the public to witness it without excitement. The late Prime Minister has filled so large a place in the public eye, and for so long a time, that his disappearance from active political life will be marked for many a year to come. With all his faults of judgment and of temper, he has always deserved and won the reputation of a sincere and conscientious man, and it may be said with perfect truth that Mr. Gladstone's sincerity has been more trusted by his enemies than Mr. Disraeli's, by his friends. Two rival statesmen were never less alike. No English politician of the century has commanded more respect than the Liberal leader; few less than the Conservative. The one is thoroughly in earnest even when wrong; the other never seems so even when right. Gladstone has won victories notwithstanding his faults; Disraeli because of his:—the former has kept his hold of power in spite of himself; the latter in spite of his party. A recent essayist, reviewing the history of Parliamentary eloquence, calls Mr. Gladstone the most eloquent debater of his time, and adds that if he had a little more imagination he would

be a great orator. Opinions may differ as to the comparative merits of Mr. Gladstone and Mr. Bright as forensic speakers, but the different excellence of each was perhaps never better set forth than in the phrase: "Were it not for Mr. Gladstone, Mr. Bright would be the greatest orator in the House of Commons; were it not for Mr. Bright, Mr. Gladstone would be the greatest orator in England." There is undoubtedly to be found a redundancy, and at times a pedantry in the speeches of Mr. Gladstone, which seriously mars their beauty: he is a voluble speaker—often hiding his thought beneath a heap of phrases; but oftener still he rises to a very high eminence and speaks with a clearness, rapidity and force very uncommon among English orators. That such a man, an orator, a scholar, and a statesman, trained by forty odd years of public service, should voluntarily withdraw from political life, while yet vigorous and strong (for sixty-four years sit lightly on an Englishman) is certainly a thing to be regretted, and his loss is one which the Liberal Party will find almost irreparable. The reign of mediocrity seems to have begun in England as well as in this country. There is no commoner among the Conservatives fit to take the place of Mr. Disraeli, so far does he stand above the rest, but the distance between Mr. Gladstone and the remaining chiefs of the Liberals is immeasurably greater. Lord Derby and Lord Salisbury, the ablest men in the Conservative ranks, are both disqualified from leadership by the sad necessity of their greatness which imprisons them in the House of Lords; and Lord Granville among the Liberals is no better off. The leader of a party must nowadays be a member of the House of Commons, and the choice of the Liberals has been necessarily restricted. Mr. Forster, who has so recently been in this country, is perhaps the strongest man who could have been chosen. He is among the foremost statesmen of the third rank, but his views of some of the most important questions of the day are too advanced to suit the mass of the party, and he has been set aside. Mr. Bright seems not to have been thought of. His age and uncertain health have, perhaps, been reasons why he should not be chosen, but he is in no sense fit by training, temperament, or character, to be the leader of a political party in the technical meaning of the term. He is an independent man in everything, and it even seems strange to find him presiding at the meeting of the party called to choose

the successor of Mr. Gladstone. The Marquis of Hartington owes his selection less to his own greatness than to the littleness of his colleagues. He has neither great abilities nor eloquence, neither personal power nor long experience, but he is the heir of the Duke of Devonshire, and the representative of the great Whig family of Cavendish; his character is good, and his capacity respectable. He will, doubtless, be a prudent and temperate leader in the struggles through which his party will have to pass in the next few years. That the future leaders of his opponents will not be in any respect his superiors, promises no brilliant thing for English politics. The setting of Mr. Gladstone and the unlooked-for rising of his noble successor, may not bring darkness on the British political world, but it will seem at first like passing into moonlight from the light of day.

THE Emperor of China is dead. His wife, of whose marriage many of us read such glowing accounts about two years ago, has committed suicide, and this tragic sequel of the young monarch's death has been delicately noticed, even in California journals, which cannot be accused, perhaps, of undue tenderness toward Chinese men and things. On the whole, however, the barbarian world has received the sad intelligence with great equanimity, and it may, perhaps, be said that so long as such events do not seriously affect the price of tea, or limit the supply of fire-crackers, they will cause little commotion outside of the Flowery Land. A young gentleman of bi-syllabic name, the son of a Prince, whose title sounds rather undignified to Western ears, has ascended the vacant throne, and a regency has been established under the control of the Empress Regent. Meantime, of course, sorrow reigns in the Palace at Peking, the button of the mandarin is veiled in mourning, and the pig-tail, in all quarters of the empire, is adorned with emblems of a loyal woe.

It can hardly be said that thus far the conduct of the Democratic party has been such as to reconcile the country at large to its return to power. It has succeeded in several instances in demonstrating an amount of incapacity to grasp the great opportunity offered to it which must have been grievously vexatious to its wisest leaders. On the whole, perhaps, the Senators whom the

Democrats have elected during the past month have been as good as the materials from which they had to choose permitted, but in one or two instances the blunders they have made have been almost criminal. The substitution of a Confederate general, named Cockrell, for Mr. Schurz, is undoubtedly the worst thing that has been done. No man has accomplished more to lead the independent men of the country up to the point which they reached last November, when they lent the Democratic party votes enough to turn the scale in its favor, than has the Missouri Senator. He was the head and front of the Cincinnati convention which, though it fell away from him and the purposes for which it was called, certainly prepared the way for Reform and struck a blow at Party Spirit (on both sides) from which it never has recovered. He is a trained legislator of broad and comprehensive views, a man of high character and upright life, and an orator of the first rank. There is to-day hardly any other man in the highest House of Congress who upholds, as Mr. Schurz does, the old-time dignity and reputation of the Senate, and he is a representative of whom any State has reason to be proud. Had the Democrats of Missouri re-elected him they would have secured a following all over the country, (the strength of which can not be exaggerated) not only of those who know and admire, and have followed Mr. Schurz, but of liberal-minded men everywhere,—who would have seen in the act a proof of that disposition to do right and to open in the Democratic ranks a place where the weary and disgusted Republican might safely take refuge—without which that party can hardly secure and can certainly not long retain a lease of power. But if it were too much to expect that a party would confer such an honor upon one who was not its regularly commissioned officer, it remained to be hoped that the Missouri Democrats would send to the Senate a representative who would not make the country daily miss Mr. Schurz and remember Mr. Blair. If all that has been said of General Cockrell be true he will do both. After the 4th of March Missouri will sink in the Senate to the level along which she walked in the years between Benton and Schurz. Alas for the glories of the Senate—she will find many sister States there to keep her company!

The selection of Mr. Wallace in Pennsylvania was perhaps the

best that could have been made from the list of candidates before the legislature. That gentleman has been too long in political life, and too active in party management, to have escaped the charges which are so easily and recklessly made against all public men. He is a man of industrious habits, of great knowledge of the business of legislation, and a ready if not eloquent speaker. His experience in the legislature will no doubt serve the State many a good turn in the Senate, and he promises to be a useful member. The unwritten law, which seems to be the guide of a Pennsylvania legislature in the selection of a Senator, which shuts the door upon a Philadelphian, narrowed the choice to four men. Mr. Clymer would have been a more cultivated Senator than Mr. Wallace, but he has less ability. Mr. Buckalew is far more able, but not half as practical. Mr. Black has more cultivation, greater ability, and besides a rare gift of eloquence; but he is the representative of that wing of the Democratic party which clings to the old at the expense of the new, and, ever courting danger, goes into it marching backwards. His successful opponent, on the other hand, has had the wit to seize the command of the other and more powerful wing, and make himself the champion of the younger Democracy, which prefers to look in the direction in which it goes. Mr. Wallace will not be, perhaps, the kind of Senator that many would wish to see representing a State like Pennsylvania; but in neither culture, nor ability, nor eloquence, nor character, will he fall below the standard which Pennsylvania has set up for her statesmen and stamped with the approval of frequent re-elections.

A great chance was lost by the Democracy in Massachusetts. When the legislature convened to elect a successor to Mr. Washburn (who, by the way, seems not to have been thought of again), Judge Curtis, the nominee of the Democrats last winter, had died, and by such a combination with the Independent Republicans as they have made in Wisconsin and in Michigan, they might have at once elected Mr. Adams. Judge Hoar and Mr. Dawes again divided the Republican vote, and the opportunity was golden. The Democrats, however, preferred to compliment Judge Abbott first and elect Mr. Adams afterwards, and the first half of their scheme was brilliantly successful. Before the remainder, however, could be carried out, the Republicans had united, and they

found that Mr. Dawes had been elected Senator. In many things he is a better choice than Judge Hoar would have been. More of a Butler man perhaps, he is less a Grant man, and he has undoubtedly been an able and efficient public servant for many years. With Boutwell and Dawes, Massachusetts will hardly take the place she held so long with Choate and Webster, or Sumner and Wilson. But this is not an age of giants in the Senate of the United States, and when the tide is out even little stones are seen.

The plan unattempted, though proposed, in Massachusetts, has been successful in two other States. No one will seriously regret the defeat of Mr. Carpenter or the quenching of Mr. Chandler's fitful fires. It was supposed that the latter's was a quenchless light, but it has not proven so. A long, sharp, and bitter struggle has done it, and a Judge Christiancy is the extinguisher. The Honorable Zachariah Chandler is one of those men whose presence in the Senate will always be a matter of wonderment. Not a man of ability, nor of eloquence, nor of learning, nor of character, he has nevertheless represented Michigan for eighteen years, and even now his re-election was deemed a matter of such importance to the party and Republican institutions that the Washington Postmaster and other public servants felt it their duty to go to Lansing and lobby for it. It is true that he is enormously rich, and wealth has a wonderful power of inspiring affection and respect; but he has not any of the personal qualities or mental gifts which made Yates, and Macdougall, and Saulsbury popular and powerful. Nothing, however, availed this time to re-elect him, and he retires to private life. Of his successor we hear good things, both as a lawyer and a man, and there seems every reason to feel thankfulness for the change.

Mr. Carpenter is a man of brilliant abilities, but of uncertain principles. He has more than once given promise of statesmanship, nearly always at last falling down to the level of the politician. Whatever has been done by the majority has seemed to him always right, and he will be better remembered as the apologist of the Credit Mobilier and the defender of the Back Salary Grab, than as the man whose bold stand on the Louisiana business, would, if his advice had been followed, have saved the party and the country many a shock. His successor, Mr. Cameron, is a native of New York, and a lawyer of good character and standing.

Governor Tilden's skilful party management achieved another success in Mr. Kernan's election. The new Senator is a man of undoubted reputation and ability, and an improvement upon his predecessor in almost every point of view.

AMONG the disadvantages under which one labors who writes notes like these, may be mentioned the fact that it becomes a duty often to dwell upon events which are distant nearly a month, and have ceased to be subjects of general discussion. Since the last number of this monthly was issued, the Report of the Sub-Committee of the House and the President's Message on the Louisiana question have been made public. The confused reports which came at the time of last writing led us unintentionally into a mistake, which did injustice to the Conservatives in the Louisiana house of Assembly. It was a mistake to assert that they refused to let the Clerk of the last House call the roll. On the contrary we now learn that he performed that duty without molestation, and that then, when his functions had ceased, the Conservatives named Mr. Wiltz as Speaker, and took possession of the House. But whatever new light may have been thrown upon the transactions of the 4th of January, no new aspect has been put upon the most unfortunate feature of it, by either message or report. As Mr. Schurz said, it may be urged that this Legislature was not properly organized, but "that is not the question," and the President's Message has advanced no arguments to prove the right of the United States to decide, under the existing circumstances, whether it was a legal assembly or not. The report of Messrs. Foster, Phelps and Potter, is a plain straightforward statement of what those gentlemen saw and heard at New Orleans, and effectually disposes of most of the charges of intimidation and fraud, that have been made against the Conservatives. On the other hand it fully sustains the accusations which have been preferred against the Returning Board, and declares that that body has deliberately cheated the Conservatives out of the fruits of the last election. The Message of the President was certainly a different document from that which we had been led to expect. It has been said that its tone and character was changed by the threat of three members of the Cabinet that they would resign, if the "heroic policy" were persisted in. It is rather to be

hoped that the President's own good sense showed him the wisdom of a more moderate course and that he was not as insensible to public opinion in this as he has seemed to be and been accused of being in other matters. Instead of defending the course of Sheridan, that part of the message which alludes to that redoubtable chieftain is full of apologies and excuse, and we are more than once reminded that the author of the original plan for pacifying the South is not a Constitutional lawyer. There is no attempt to justify the use of the United States troops on the ground of a right to interfere in the internal affairs of a State, but rather an excuse for their acts in this matter, because of the alleged exceptional and revolutionary character of the proceedings on the 4th of January. No answer has been made to Senator Schurz's arguments, unless the reiteration of the charges of murder and intimidation be called arguments (which they seem to some minds to be) and the whole Louisiana question remains unsettled. The committee of which Messrs. Foster, Phelps and Potter were a sub-committee, dissatisfied with the latter's report, has gone to New Orleans for further investigation, and meantime Congress and the country wait.

General Belknap seems to have acted with as much haste as General Sheridan, and with a reckless disregard of the feelings of his colleagues which has been rare thus far in the history of Cabinets. His famous dispatch turns out to have been sent without consultation or authority. The majority of the Cabinet did not "approve" and knew nothing of the telegram, and as the President has distinctly taken different ground since then in his message, the words "the President and all of us" must now be taken to mean "the Secretary of War." The correction is important. The approval of General Belknap may not seem so weighty to the country as that of "all of us," but it may be a great comfort to General Sheridan and he ought to be allowed all the consolation he can find in it.

THE Civil Rights Bill has been passed by the House and sent to the Senate—not the Senate bill, but another which was in the hands of the Judiciary Committee. To pass it has required extraordinary labor and some extraordinary acts on the part of the Republicans, and it was not effected without a change of the time-

honored rules of the House. For forty odd hours the Democrats, under the lead of Mr. Randall, filibustered and fought, and the Republicans were compelled to postpone the matter, but at last they secured a majority for the change of the rules, and passed the bill. Many Republicans voted against it on the ground of its unconstitutionality, and because, as was well said by Mr. Phelps, you cannot legislate prejudice away, but will only strengthen it by attempting to do so. Some wise heads saw in the passage of the bill another and a crushing blow at the supremacy of the party, but General Butler made the characteristic statement that the party had been defeated because it did not pass it last Winter. Which view is the true one will soon be shown. A most unpleasant incident of the debate was the behaviour of Mr. Brown, of Kentucky, who made an attack on Gen. Butler, which recalled the ante-bellum days. Though interrupted by the Speaker, who warned him of the danger, he continued to the end, and received for his pains and ill-temper a formal vote of censure. Nothing could have been more fit than the few sentences with which Mr. Blaine expressed the censure of the House, and, indeed, in all these stormy struggles his tone and temper have been admirable, and his command of himself and the House perfect. The next Congress will be fortunate if it shall secure a Speaker as able and prompt as he.

BEFORE this is published the municipal election in Philadelphia will have taken place. The importance of the present campaign is seen at once, when it is remembered that twenty-four Magistrates, who are to replace the Aldermen, and a large part of the Councils are to be chosen. The Magistrates are to fill an important office. When the Constitutional Convention met, one of the abuses most needing reform in Philadelphia, was the condition of the aldermanic office. So debased had been these offices, so bad the general character of the incumbents, that it was thought necessary by the Convention, and so stated at the time, that not only the offices, but even the name of Alderman should be abolished. With the honest intention of improving matters and of securing for Philadelphia a great reform, the new Magistrates' Courts were created by the Convention; the provision that the future occupants of these judicial offices should be "learned in

the law" being unhappily stricken out, in deference to the views of gentlemen who feared that thereby they would be seized upon by "crotchety lawyers," to the exclusion of the intelligent, philanthropic men of business, whose large experience, common sense and tried integrity would be of such service to the people, and who were supposed to be all ready to accept them. The Reform Club, as we said last month, labored earnestly to secure this safeguard against the renomination of the present Aldermen and others like them, but in vain. The Union League and the Democratic Association were against it, and the Law Association lukewarm in its favor. The bill was passed without it, and the door left open to all men alike. The Union League, of glorious memory, had meantime re-announced its intention "to oppose bad nominations," reserving to itself (or rather, unfortunately, to a certain small, but not still, voice within itself) to say what definition it would put upon that adjective. The conventions of both parties came together. Each accomplished by different means the same result. The Republican convention was a model of order. No well regulated clock ever ran with more smoothness, or struck the time more faithfully. Fifteen men were to be chosen, and fifteen men were named. One by one they were elected with a unanimity flattering if strange. When A was nominated, B's friends were still. When B's turn came, C's delegates were hushed. When C was chosen, no murmur came from D. It was a sublime spectacle. The Democrats on the other hand fought savagely. No pent-up Committee of Arrangements contracted their powers, or made a slate for them in peace and quietness. They raged and tore hair, and called hard names, even going so far at times as to toss each other about playfully, as it were, from gallery to floor and back again. At one time the affray was so threatening that the chairman had to send for the police—the Republican police; but the Mayor, remembering New Orleans, would only interfere, it is said, on receipt of a written request. The favor was asked in writing, and the blue coats and metal buttons for a time stilled the storm. After two days of warfare the deed was done, and sixteen men were declared the nominees. Thus did each convention, after its own manner and according to its own light, and the end of both was quite the same. It is safe to assert that two worse tickets could hardly have been named. Both are largely

made up of the old Aldermen. The Republican is a shade above the Democratic: though any change would make the one better, and no change could make the other worse. A universal outcry greeted the nominations. It came from all men and all parties alike. The newspapers took up the cry. Some of course saw the tickets through the spectacles of party, and thought that of the opposite side worse than its own, but all agreed that both should have been much better. The Reform Club at once took action, and requested the League and the Democratic Association to scrutinize the tickets and co-operate with it to secure the nomination of better men. The former made quite a show of doing so at first. Excellent gentlemen said that something ought to be done—and left other men to do it. Worthy citizens suggested good ideas—in private conversation. Patriotic persons hoped the committees would do so and so, but forgot or neglected to attend upon the meetings. Not so, however, other excellent and worthy and patriotic men, who agreed with them that “bad” nominations should be opposed, and only differed from their absent colleagues as to the meaning of that word. One after another the candidates seemed to grow better. “Recommendations” and “endorsements,” which are always plenty as blackberries, began to flow in systematically with wonderful convincing power, and the Union League finally decided to support thirteen of the fifteen nominees. The Democratic Association was much more sweeping in its suggestion of a change in the party ticket. Off of the sixteen it proposed to strike six. It was certainly no easy task for many of the endorsers of these ten and thirteen candidates, but they accomplished it successfully and without any serious results to the candidates or to themselves. But the regular heart was adamant, and refused to be softened by entreaties, tears or threats, and at this writing neither ticket is reformed. The Reform Club will doubtless make an effort to give to the people at least one ticket of good names: it remains to be seen how far superior the people are to those who seek to lead them. They have been often right when their leaders have gone wrong: they have never been wrong when their leaders have been right. It certainly looks now as if the city of Philadelphia was about to be blessed with a lot of magistrates whose only difference from aldermen is that they have high salaries and long terms of service, and greater power for good or evil;

as if the Constitution had legislated the Alderman out of office only to make him Magistrate, and turned him out of the place he had dishonored in order to lift him into a far better one. It ought to be a comfort to those statesmen who opposed the New Constitution and its reforms, to reflect that in Philadelphia at least (as a rule, and with but one notable exception) none but its enemies have been elected into office under it.

NATIONAL EDUCATION. II.

EVERY State is especially a jural state, a body politic for the realization and enforcement of the national ideal of righteousness. For that end every state makes and publishes laws, which are based upon that ideal, and shaped according to the science of jurisprudence. This process of drafting into laws the national conception and ideal of righteousness, when it is carried on in connection with the best public opinion of the nation, is itself a process of national education, for every honest attempt to do the right clears up to the mind the conception of the right. Hence the ideal of righteousness is continually becoming clearer, more definite, and more practical to the minds of a righteous people, and the laws themselves continually need to be changed, though not in an abrupt or revolutionary way, in order to bring them up to the national conception of the right. But in every nation as in every man, there is a worse and a better self,—the spirit that delights in the ideal of righteousness, the law of God, and the flesh that weakly and slothfully prefers the pleasantness of self-indulgence and falsehood to the severity and downrightness of truth and duty. The true statesman is one who discerns the higher will of his people, and addresses himself to that,—who fights against the lower will or ignores it altogether. The political charlatan makes his appeal to the lower and baser will or nature of the nation, and prospers by pampering it. He thinks of the next election as the other thinks of the next generation or the next century. Not that the true statesman is a *doctrinaire*, whose head is filled with *a priori* conceptions of political method and plan. He cannot be such, for

he always makes the actual higher will and nature of an actual nation his study, and he searches after the higher facts for his guidance as zealously as the other for the lower. No *doctrinaire* was ever a true statesman; Sumner has no more claim to a place among such statesmen than Butler, in spite of the vastly nobler character of the great and good Senator. Lincoln is perhaps the best illustration of the true type of statesmanship that this generation of Americans has seen; and is especially worthy of study, because, from Jefferson down to Sumner, doctrinaires have been the most admired class in American politics, and have indeed come to be considered the only class that are not actuated by low motives.

To learn the best and highest will of the actual nation, the long-run drifts of public sentiment—which are always ethical—and to be misled by no false indications, is the work of the statesman. To develop that best and highest will in the character of the rising generation, must be the function of national education as related to the jural state.

Once, government was regarded as identical with restraint and punishment; and with a certain class of theoretical despots, the conception is not yet obsolete: when they speak of a strong government, they mean one that carries out the will of the ruler—the King or the majority,—with a high hand, overrides all opposition, and silences all remonstrance. But citizens of a free country should feel that such a government is essentially weak and imperfect, and that a strong government is one that excites a minimum of opposition while doing a maximum of work. The necessity for constraint, the existence of opposition, is a sign that the government is weak. Every prison advertises to us the truth that men are still but 'prentices at the trade of ruling. The policeman and his baton announce not the existence of authority, but its absence. Every so called "sanction" of the law is either a confession of the law's imperfection or of the failure to raise men to the degree of mental freedom that makes them consent to the law and obey it readily. And the nearer government comes to its own perfection, the more the element of constraint and force retires into the background, and the vaster are the results that will be achieved by the purely spiritual agency of the authority of just law. In the perfect state the law will be "the law of liberty."

The state takes a grand stride towards this goal when it begins

to educate men for their place in the body politic. It takes its seat at the very fountain heads of national life, and instead of waiting till the waters have gathered volume and force, and taken a fixed but wrong direction, it seeks to direct each little current from the start, to the great end to which it should move. But can it be said that this step has ever been taken in our system of public education? Has the formation of the character of the young, the development in them of the love of righteousness, and the consent to just law, order and authority, been more than a very subordinate and merely incidental part of the training attempted? It is indeed continually held up as the great end of our school education, by those who are not actual teachers. Directors and local statesmen, who make speeches at our grammar school exhibitions, and editors who write laudatory or even critical estimates of the system, express themselves as if these aims were kept in sight. But every teacher, every thoughtful scholar even, must feel that there is a vast contrast between these statements and the actual every-day work and routine of our schools; that whatever specific training in this direction is actually given, is not contemplated by the system itself, but is effected by teachers who wisely step outside of it. Not that nothing whatever is effected for the discipline of character in our schools. As already said, the very order and cleanliness enforced in the school room, is in itself often a wholesome corrective of the lessons learnt in disorderly homes; and the elementary lessons learnt in the power of expressing thought, do away with a multitude of occasions for violence and violent crime. But we suppose that no friend of the system would be content to secure so little as may be reached by these indirect influences. No one would think that society had no right to expect larger results in this department, in return for the vast pecuniary outlay made to keep up our public schools.

If any ordinary branch of education, say arithmetic, were totally neglected in our schools, there would be a loud and general outcry from all quarters; were directors and parents indifferent, the very teachers would make themselves heard in advocacy of the teaching of any subject that the nature of the case clearly calls for; yet here is a line of teaching which concerns matters of more importance to society than all the ordinary branches of knowledge put together, and it is silently allowed to occupy the

very lowest place in the list, to have no formal provision made for it; and nothing attempted but incidental teaching, which is introduced or omitted at the pleasure of the instructor, and which is probably more generally omitted than introduced.

And yet this neglect is as natural as anything can be, and furnishes little or no ground of complaint against those who have the responsibility of the matter in their hands. The nature of the subject explains the neglect. It cannot be taught in the direct, and even mechanical fashion, in which the ordinary branches of a common school education are imparted. A great deal of teaching might be given, and given very effectively, that would do ten times more harm than good. It might turn the child from his innocent, fresh, unconscious childlikeness, into a pert, self-conscious, pharisaic prig, and yet do no whit to make him a more righteous man. All of us have seen such results attained by injudicious family or Sunday-school training; and most people find the results socially unendurable. It is no wonder, therefore, that the managers of our public schools have shrunk from entering upon a path beset by so many dangers, and yet it is one from which they cannot forever hold themselves back. The weight of public opinion will yet compel them to enter it. For the sense of the greater importance of the results to which it may lead, though not now forcibly present to the public mind, will not fail to become so. The churchly assailants of the system will not fail to plead any remissness in this direction as a confession of the failure of the whole system. They will say: "The State has not the power to educate, for education is a calling forth of man's higher nature into active energy, and the State can speak only to the lower nature. It has no language but prohibitions, restraints, and punishments. Only the church has *power* to educate the nation, and there is no use of discussing the abstract *right* to educate. The right goes with the power. Education is a spiritual function; it is the formation of a character; a character is a perfectly formed will, and if there be any spiritual principle in man, the will must be that."

These objections are capable of but one answer: the schools of the State must evince their capacity to educate in this sense; must make such education a part of their system of training. If they cannot, or do not, then as these objections, and the consid-

erations on which they are based, gain influence with the public mind, education will gravitate back to the church again, as to what is simply the most competent body. With every popular advance in the comprehension of the nature of the State, the chances of such a revolution are increased, unless the public schools prove themselves capable of the very best results in this direction.

We believe that they are capable of such results, and that they can make the moral progress of the nation work in their favor and not against them; not that we would undervalue the magnitude of the problem, or make light of the practical difficulties that are in the way; but we believe that these are not insuperable. For we hold that the State has spiritual functions,—that all good government is to be achieved by bringing the *wills* of men into play in the right direction—by enlightening them as to the best and justest method of procedure, and making them consent and agree to its adoption: and as the will is the spiritual principle in man, and the State must speak to that and call it forth, the exclusion of the conception of spiritual activity from the conception of the State, rests upon a false conception either of the State or of what is spiritual.

Indeed, as we have already said, the whole business of the statesman is a work of education in this sense. He has to discern what is the higher will of the people as distinguished from the lower, to distinguish between the popular impulses that rest on the national ideal of right, and those that have their root in lower and baser motives. He has to direct the policy of the nation so as to reduce that national ideal of right to actuality, and thereby bring up the people to yet clearer conceptions of righteousness; for doing, as Jesus Christ said, is the way to knowing. Doing the duty that lies next your hand, the duty about which you can have no doubt, is the way out of doubts and difficulties, the way into all necessary knowledge of the truth that pertains to duty. Nothing so clears up a man or a nation's conceptions of right and truth, as the honest contact with reality in the discharge of plain duty.

And what the statesman does in the larger sphere, it is the teacher's vocation and function to accomplish in the smaller. He must be a teacher of ethics, not by pouring into the youthful mind a vast quantity of moral information, but by awakening in the mind itself the conception of righteousness, and clearing

away, as far as possible, the confusions and mists that surround that conception. And the true text-books for such teachings will not be manuals of morality, but the examples of just men.

The whole store-house of the past is full of materials for such teaching. Plutarch alone is worth all the moral compendiums that the world has ever seen, and few men have rendered such grand services to the human race as did the old Bœotian who made such faithful and loving studies of the great men of Greece and Rome, and perpetuated their memories in such life-like pictures. Pedants may revile him as uncritical, as a plagiarist, but the instinct that drew Shakespeare to his pages lives in every human breast. Had his books been lost, antiquity would have lost half its charm and more than half its worth as an instruction in life. For Plutarch's *Lives* are thoroughly instructive—all the more so because they attempt so little teaching in a formal way. The reader drinks in unconsciously the heroic and patriotic spirit, the valor, the manliness of the great men of the past, and without an effort understands what gave vitality and strength to the old commonwealths. This man who had no country, no freedom, no national hopes, has managed with the greatness of genius to "put himself in the place" of Greeks and Romans who had and lived for those things, and to give us such pictures of Roman and Greek virtues as will never lose their freshness, and their charm of *vraisemblance*. All that was best in paganism is here embalmed as nowhere else, and in a shape that makes it a perennial source of delight to the young.

And with Plutarch should be studied and read in our schools, some similar body of biographies of the great and good men of the modern world, written with the same breadth of sympathy and love of all things excellent and of good report. We have no such book yet, though we have an abundance of material for it—a multitude of books out of which it might be compiled and condensed. There, for instance, are Asser's *Life of Alfred*, Eadmer's of Anselm, Einhard's of Karl the Great, Jocelyn's story of Abbot Sampson, Roper's *Life of More*, the three biographies by Isaac Walton, that of Luther by his friend Matthesius, that of Fenelon by Ramsay, that of Johnson by Boswell, Stanley's *Life of Arnold*, the *Life of Niebuhr*, and, Bulwer would have us add, that of Robert Hall by Dr. Gregory. Materials for others would be

found in Fuller's *Worthies of England*, the Bollandist *Lives of the Saints*, the works of Thomas Carlyle, Charles Kingsley, John Henry Newman, and indeed, everywhere in modern literature. Nor would America be without her quota, for the autobiography of Franklin, that of Lyman Beecher, and Mrs. Child's *Life of Isaac T. Hopper*, are among the most delightful and instructive of biographical works. All would need recasting and careful treatment, but the result might be such a book as would inspire our young people with the spirit that utters itself in great lives, and wean them from the unwholesome love of a low class of fiction by the higher attractions of fact and reality. By examples of great living in low places, as well as in high, it might bring home to them the truth that "every situation in life has its ideal," and that if any be burdensome and monotonous, the fault is not in itself, but in its occupant. And above all, these lives should be selected and written with reference to the man's position in the nation, and the relation of his life to the national life. They should teach at every step the lessons of public spirit and self-sacrifice, and of devotion to righteousness.

But we are not to forget that there already exists a text book for such instruction, which is at once more effective, more attractive in style, more popular, more profound, and yet excellently simple and forcible in its presentation of the facts and principles that this education aims to give, than any ancient Plutarch ever was, or than any modern Plutarch is likely to be. We mean the historians and poets and prophets of the Jewish nation, whose writings are collected into the volume we call the Old Testament. That book is no churchly manual of doctrines and precepts; it is the nation's book far more than it is the church's book. It is the story—confirmed by modern investigation of the early life of nations—of the process by which the family of Jacob grew into a tribe, a cluster of tribes, a nation; of the disclosure of the divine law of righteousness as the foundation of the national life; of the slow and painful steps of the nation's training in the apprehension of that law; of the sins by which it violated its own conceptions of it, and of the miseries and punishments to which those sins necessarily led. It is the narrative of a nation's experience, as if at the mouth of a severe but friendly judge, whom no glamour or brilliancy of unessential facts ever leads away from the great and

everlasting standard of righteousness, as he tells us how compliance with the laws that embodied that standard made this people a free, united, strong and prosperous nation, while every conscious and wilful violation of them tended to enslave, weaken and divide them. Especially do the prophets set forth with great force and clearness of matter, as well as with incomparable beauty of style, the laws of the nation's life, and the relation of its conduct to those laws. They were in general not "foretellers of future events" by their vocation, save as the knowledge of the moral laws that govern society enabled them and constrained them to foretell whither society in their own days was drifting; for, as Comte says, prediction is the test of the reality of science. Some of their books contain no predictions whatever; much of what is given in others is the purely conditional utterance of men who discern the laws that govern social movement, and warn their fellows of what is to come; in some cases their utterances have been distorted into predictions by utterly sundering passages from the context, and interpreting them out of all relation to the historical circumstances to which they allude.

The whole of the Hebrew literature, indeed, has been overlaid and nearly smothered by a load of edifying, allegorizing, microscopic and other unhistorical sorts of commentary, till its true sense is nearly hid from the popular consciousness. We need for its recovery to its right owner, the nation, expositions of the book such as is sketched in broad outline in Prof. Maurice's *Prophets and Kings of the Old Testament*, and such as Sir Edward Strachey has given us of the prophecies of Isaiah in his *Hebrew Politics in the Times of Sargon and Sennacherib* (2d Ed. 1874). When read in that light, the Hebrew nation is seen, indeed, to have, as every nation has, its own special function in history—the exemplification of the relation of the national life to the divine will. But it is seen, also, that that specialty of its vocation makes it not the less, but the more an ensample to all other nations, and its literature the text-book of all national life. For while every nation has its distinct calling, and is, for its own special purpose, "an elect people," the experience of each is the possession of all—and the more so in proportion to the significance of the single nation in the moral order of the world. Here the Hebrew nation is central as the palmary illustration of the ethical basis of the national life.

The Old Testament, therefore, should not be excluded from our public schools; there could be no greater misconstruction of its purpose and its contents than to regard it as out of place there, or to conceive of the State as complying with popular prejudices, or paying tribute to some critical and half-hostile power in allowing it to be read there. It should be the central book there; it should be not only read by the principal, but studied by the scholars, with the same careful attention to its words, the same large and wide attention to each book as a whole, the same effort to foster "the friendship of books" in the minds of the scholars, as Chaucer or Spenser or Milton should receive.

Next to the Old Testament itself, the best teacher of national morality would be a history of our own nation written on the same principles and with the same simplicity. Such a book would be characterized by no affectation of a Biblical style, and no repetition of Biblical phrases. It would not quote a text nor use a Bible name from title-page to *fnis*. It would contain no prosing "moral," no edifying application. It would be simple, direct and natural as the Bible itself. It would proceed upon the same method in the selection of representative facts, passing by those that cast no light on the people's attitude of mind and heart towards the divine law of righteousness, and selecting for its emphasis those that disclose the nation's ethical position and progress. It would start from the assumption of a national vocation, and show how the ends that men had rough-hewn were shaped by an overruling Providence. It would single out for praise and admiration the just men who had sacrificed themselves in many ways for their country, and yet would not be blind to the faults and sins that stood in the way of their serving their country perfectly.

It will hardly be claimed that our present school histories are written on any such principle, or aim at giving any such lessons. They show far more traces of the influence of the Fourth of July Oration than of the Hebrew Prophets. They are a part of that pernicious literature of *bragadoccio*, by which our brief but very honorable history has been made ridiculous, and divested of all power over the imagination, so that our cultivated classes are driven to Europe for the scenes of historic interest and association which they no longer find at home. But it is the highest wisdom to be spurred to larger efforts by every failure, and if we are driven to

associate our principles with the deepest, the everlasting principles that govern the universe, as the only escape from spread-eagleism, we may well reckon the latter a blessing in disguise. At present it is the disguise that is the most striking thing about it.

Nor can our national schools afford to dispense with the New Testament. We are in so far a Christian nation, that our national ideal of character contains elements borrowed from the Sermon on the Mount, as well as from the Decalogue. The hard legalism of the merely righteous man—of the man who stands unyieldingly upon his rights and his duties, who knows no higher impulse than a rigid conscientiousness—is nearly as offensive to the national conscience as unrighteousness itself. *Summum jus, summa injuria*. We expect a moral courtesy, a self-sacrifice, a charity, an unreadiness to seek one's own to the uttermost, to do anything that is not technically wrong. If these are wanting, we feel and confess the fact that the man comes short of the highest ideal. If society were largely made up of such men, the law itself would fall into disrepute, because continually made the instrument of personal selfishness. That it may be safe, and stand well in public opinion, a spirit above the law must exist in society and mould men's characters. The New Testament makes the great demand upon men that they shall be actuated by such a spirit, and declares that it is already striving to enter and possess men's hearts, and to transfuse them with the "sweetness and light" of a higher life than the law itself can ever awaken. Here also is enunciated and illustrated the distinction and the antagonism of man's higher and lower nature—a distinction whose denial has been the source of endless moral confusions, especially during the last century.

But while the New Testament demands that a higher than the legal spirit shall actuate those who are subject to the law, it does not set aside the law. It leaves the old principle of legal equity—"an eye for an eye, and a tooth for a tooth"—untouched as the basis of all merely jural relations and of the State's jurisdiction. But it "magnifies the law and makes it honorable"—makes much of it where human selfishness, if uncontrolled by the spirit of Christian charity and meekness, would belittle it; puts honor upon it, where a hard legality would bring it into dishonor and

contempt by making it the instrument of real, though not technical, unrighteousness.¹

Happily, in its English form, the Bible is one of the chief text-books of the English language, and has done more to fix the language than any other book. "Its felicities," says Father Faber, "often seem to be almost things rather than mere words. It is part of the national mind, and the anchor of the national seriousness.....The potent traditions of childhood are stereotyped in its verses. The power of all the griefs and all the trials of a man is hidden beneath its words." And besides, it is so interwoven with all English literature that the great mass of English writers—Dryden and Scott, Byron and Shakespeare, not less than Milton and Bunyan, Coleridge and Wordsworth—are not completely intelligible to any one who has not mastered its contents. This has been the experience of the Hindoo students of English literature, who generally prefer the missionary schools in which the Bible is read to the government schools from which it is excluded. They account for its exclusion by attributing to the government a jealousy similar to that which for centuries hid the Vedas from the eyes of Europeans.

The discipline of the school-room should be a part of this education in the formation of character. It should be arranged by distinctly enunciated laws, that the child may feel that it is not ruled by the caprice of the teacher. And those laws should be enforced with at once the severity of the Old Testament and the tenderness of the Gospel. It should be felt and understood that every violation will bring its punishment, with the unerring uniformity of a law of nature itself; but, at the same time, punishment and passion should be kept utterly apart. The spirit of the infliction should be that of Christian charity, and even affection. We think, with John Stuart Mill, that the boy-world has not yet outgrown the strap, and that the sacred fire of the gods is still brought down from heaven to earth in the *ferula*. But punishment should be inflicted with careful regard to capacity; it should

¹ The only passage of the New Testament that seems to contradict this statement, is the story of the woman taken in adultery, which some officious scribe has thrust into the fourth Gospel. But that passage is rejected by all the great critical editors of the New Testament, and, it is to be hoped, will not appear in the forthcoming revised version.

be for violation or neglect of duty, not for mere defect of scholarship.

And no valuable results in the formation of character need be expected so long as the lower nature of the student is deliberately appealed to by our educational system itself, and made our dependence as an efficient motive. The Apostle Paul expressly enumerates *emulation* among the works of the flesh, the out-comings of man's lower nature, whose predominance makes men corrupt as politicians, untrustworthy as employees, and dishonest as tradesmen. But the whole system of marks, distinctions and prizes, upon which our school system depends for its motive power, is a systematic fostering of emulation, with no power to check its outflow in "envying and strife, . . . confusion and every evil work." We cannot even set our faces toward this highest end of education, the formation of character, without leaving that system utterly behind us.

Above all things, the virtue of truthfulness, the fundamental element in all manly character, should be carefully cultivated in the boy. He should be taught to despise all slyness and concealment; and everything that might lead him to suppose that "Thou shalt not be found out" is one of the commandments, should be avoided as a blight to his moral life. Loyalty to fact is the crowning virtue of our masculine Teutonic race—is, in the last analysis, the fundamental virtue that holds society together, and furnishes a basis for all its proceedings—political, industrial and social.

Self-government is the end of all that is here proposed, and perhaps it should begin before the pupils leave the school to enter upon actual life. It might be very profitably extended, with due supervision, to the higher classes in schools, and the English fashion of making the "sixth form" responsible for the order of the whole school might be worth trying. But changes of this sort would need to be made very slowly and carefully, and with a thorough consideration of the human material to be used.

THE HYGIENE OF THE EYE, CONSIDERED WITH
REFERENCE TO THE CHILDREN IN OUR SCHOOLS.

THE physiological facts, which bear upon the subject of this paper, are so easily apprehended, and the conclusions which follow immediately from them are matters of so much importance in a practical point of view, that it would be well, perhaps, to begin by passing some of these facts in review before us; we shall then see that the conclusions which we draw are but the necessary results of the data with which we have to deal.

The normal eye has approximately the form of a sphere. Such an eye is called emmetropic. A short-sighted eye is, in the majority of cases, elongated, having more the shape of an ellipsoid, with the long axis horizontal. Such an eye is called myopic. The opposite condition from that involved in myopia, in which it is necessary to place a far-sighted or convex glass before the eye, to enable the individual to see clearly in the distance, is called hypermetropia. Such an eye is, in the great majority of cases, shortened in its antero-posterior axis. It resembles somewhat an ellipsoid with the long axis standing vertically.

Now the question may be raised, is the myopic eye to be considered as a diseased eye? The answer is, that the condition of myopia in itself can scarcely be considered as disease. It may, however, lead to very serious diseases of varying character, and hence assumes, in virtue of these possibilities, a pathological importance, which it would not, in itself, possess. It stands, as it were, on the limits between the physiological and pathological. Like the atrophy of the tissues in old age, like many other processes occurring normally in healthy persons, which we cannot now consider, it forms another illustration of the great fact that, in nature, there are no sudden breaks or jumps, but only gradual transitions from one condition to another. The physiological goes insensibly over into the pathological. From this point of view we see that whatever measures we may take to prevent the development of myopia, so far as this lies in our power, may prevent, indirectly, the development of serious diseases, the possible sequels of myopia, which endanger the functional and organic integrity of the eye.

Now we know, from statistics which have been furnished on this subject, that in a certain proportion of cases myopia is hereditary. A child may inherit the peculiar formation of the eye, which we designate as myopic, from a short-sighted father or mother, without the intervention of any of those circumstances to which the development of myopia is usually ascribed. We often meet with illiterate countrymen who have never occupied themselves much with reading, writing or other pursuits, involving constant use of the eyes for short distances, who are, nevertheless, myopic. We usually are able, in these cases, to trace a hereditary predisposition.

In another and very large class of cases, however, we find that the development and increase of myopia depend upon use of the eyes in short distances, such use as is involved in reading, writing, working on objects which must be held close to the eye on account of their smallness or the fineness of the parts of which they are composed, etc. Naturally, even in these cases, we must presuppose a predisposition for myopia in the eye, which, in consequence of these influences, subsequently becomes myopic; otherwise there would be many more short-sighted eyes than there really are in this age of intellectual and mechanical activity and high-pressure civilization. It is only meant that the above-mentioned cause develops in very many cases the predisposition for myopia into actual myopia, which in its turn may produce various actual diseases of the eye.

How can we explain the development of short-sightedness in an eye by the action of the causes just mentioned, viz., reading, writing, working on fine objects, etc.? In order to do this we must enter as far into the general physiology of the eye as is necessary to render the subsequent discussion intelligible.

The eye, in a state of rest, is enabled to unite in an image on its retina only rays of light coming from objects which are situated at the distance of its far-point. Thus, a normal eye (in case the apparatus for adaptation, or accommodation, as it is called, and of which we shall presently speak, is not set in action, or in case this apparatus is paralyzed,) can only bring to a focus on its retina rays of light which fall upon its anterior surface parallel to one another. Now all objects which are within a finite distance send forth divergent rays of light, which naturally are refracted

by the so-called dioptric apparatus of the eye (that is, the cornea and lens) to the same degree as parallel rays are refracted by the same dioptric apparatus, provided the muscle of accommodation remains at rest; in other words, such divergent rays would be brought to a focus behind the retina in a normal or emmetropic eye, and so-called circles of dispersion of light fall upon the surface of the retina, were it not for the action of the ciliary muscle, the muscle of accommodation, whose functions we shall presently discuss.

The stars are so far off that we consider the rays of light coming from them as parallel to all practical intents; that is, we regard the light of the stars as coming from an infinite distance. Hence, a person with a normal eye, if the muscle of accommodation were paralyzed, could only see the stars clearly. The rays of light which come from nearer objects could only produce circles of dispersion upon the retina of such an eye.

Now every eye, be it normal, myopic, or hypermetropic, has the power of making itself more myopic, or of accommodating, as the expression is, for near objects. This accommodation is effected in the following manner. Just above and behind the insertion of the iris is a circular muscle, the ciliary muscle. The lens, which lies immediately behind the iris, is suspended in its capsule, which capsule is held in place by the so-called zonula, or better, the suspensory ligament of the lens. The inherent elasticity of the lens causes this body to strive to approach more nearly to the form of a sphere than is rendered possible by the tension of the capsule and the suspensory ligament. When the ciliary muscle contracts, however, the suspensory ligament and capsule are relaxed, and the surfaces of the lens become more convex: in other words, the refractive power of the eye is increased, and this increase is proportional to the amount of contraction of the ciliary muscle. Hence a person with a normal eye can see not only the distant stars, but nearer objects, with perfect distinctness.

It follows from this that the degree to which the ciliary muscle must contract, in order to afford clear vision of near objects, the letters of a book, for example, will depend upon the natural refraction of the eye in question. In a normal eye, the condition of refraction must be changed from that which brings to a focus

on the retina rays coming from a distance which, to all practical intents, we consider as infinite, to that which unites in a focus on the retina, rays coming from objects that are only eight or ten inches distant. In the short-sighted eye, on the contrary—let us take for example an eye, the distance of whose far-point is fourteen inches—only a very slight contraction of the ciliary muscle is required to render the eye so much more myopic, that rays coming from a distance of from eight to ten inches may be united in a focus on the retina.

There is still another point in the physiology of vision, which we must briefly consider before we can proceed to an intelligent discussion of our subject. In looking at objects, whether far or near, we make use of both eyes. Now in the fixation of an object, certain points on this object and the corresponding points of its image on the retina, lie on a straight line which passes through the centre of the lens. This line is called the visual line. The visual lines of the two eyes meet in a point of the object, thus forming an imaginary angle, which is called the angle of convergence. It is evident that the more distant the object, the more acute does this angle of convergence become; whereas in proportion as we bring the object near the eye, the angle of convergence becomes more and more obtuse. The visual lines always connect the central points of both retinas with the point of the object which forms the apex of the angle of convergence. Hence, the eyes must be rotated inwardly toward the nose, the nearer the object approaches. The muscles which rotate the eye inwardly are called the internal recti. We see from the foregoing, that efforts at accommodation or contraction of the ciliary muscle, which shortens the focus of the eye, must always be associated with efforts at convergence or contraction of the internal recti muscles. Not only in the fixation of a point in an object must the rays of light proceeding from that point be brought to a focus on the retina, but the visual lines which meet in this point must fall upon each retina in its centre. Hence a certain degree of contraction of the ciliary muscle implies a certain amount of contraction of the internal recti muscles. This relationship is called the relationship of coördination or of association subsisting between these muscles. We come now to

the application of these somewhat complicated physiological facts and laws.

In making use of the eyes in reading, writing, etc., the ciliary muscle with the internal recti are maintained in a condition of constant contraction. In a short-sighted eye, we find, as was before stated, an elongation of the globe, which may depend either on a simple increase of the antero-posterior axis of the eye, the eye thus having the form of an ellipsoid with the long axis horizontal, a condition which is called bathymorphia; or the elongation of the globe may depend on the development of what is called a posterior staphyloma, that is, a projection, a species of bulging out of the posterior part of the eye-ball. Very frequently both conditions are associated. As a third cause of the defect of refraction in question, we have a greater convexity of the lens than is usual in the eye. It has been found that persons who were emmetropic or even hypermetropic, have become temporarily or even permanently short-sighted, after being engaged for a long time at occupations involving great strain of the accommodation, and the cause was found to be not bathymorphia or the development of a staphyloma posticum, but a permanent increase of the convexity of the lens. If, by means of a strong convex glass, we throw concentrated light upon the anterior surface of the eye, we see three small images of the flame from whence the light proceeds; the first produced by the cornea, the second by the anterior surface of the capsule of the lens, and the third by the posterior surface of the capsule. Cramer found that, in certain cases of myopia, the size and mutual position of the images on the anterior and posterior capsule of the lens corresponded exactly with the size and position of these images in emmetropic eyes during the accommodation for near objects; thus showing that the myopia, in these cases, depends upon a permanent increase in the convexity of the lens.

The researches of Kohn show that in children the development of a staphyloma posticum generally begins when they are sent to school, and obliged to spend many hours of the day in reading, writing, etc. His researches also show that the proportion of myopic individuals is by no means the same in all schools, but is very much increased in those schools where the amount of day

light admitted is insufficient; or where the desks are too high with reference to the height of the seats, thus forcing the scholars to bring the book or paper too close to the eye; or where the arrangement of the tables and benches is such that the scholars are compelled to incline their bodies far forward, and to bend their heads over very much. It is evident that in the first two cases an unusual amount of work is imposed upon the ciliary muscle. If the amount of light be insufficient, the book or paper must be brought very near the eye, so that the largeness of the retinal image may compensate in a certain degree for the distinctness that would result if a greater amount of light were given. But the nearer the paper or book is brought to the eye the more myopic must the eye make itself, in order to unite the rays to a focus on the retina; in other words, the ciliary muscle, and, as a consequence, the internal recti, must contract with unusual force, in order to produce and maintain the amount of refraction rendered necessary by the above-mentioned evils.

Now that we have seen that short-sightedness is actually produced by continuous use of the eyes for reading, writing and various kinds of finer work, particularly if the conditions under which such work is performed are such that the ciliary and the internal recti muscles are strained to the utmost of their functional power, it becomes interesting to inquire how the staphyloma may be produced in this way.

The explanation is as follows: Whenever an organ is worked to excess, there is a great flow of blood to the part, it becomes congested. In the case of the eye, the continual strain to which its muscles are subjected, produces an habitual congestion, the vessels in its interior become overcharged with blood, and the intra-ocular pressure, that is, the pressure of the contents of the globe upon its fibrous capsule, the sclerotic, may increase, the elasticity of the latter may be partially overcome, and so a projection of the posterior part be produced, forming the staphyloma. Again, when the ciliary muscle and the internal recti muscles are put very much on the strain, the lateral pressure from the internal and external recti muscles, which are situated the one on the nasal, the other on the temporal side of the eye, may assist in producing the elongation of the globe.

If the staphyloma increases to high grades, inflammation may

be developed in the posterior part of the eye, causing more or less disturbance of vision. The retina may become detached from the coat of the eye which lies exterior to it (the choroid), whereby vision is almost completely destroyed. Intra-ocular hemorrhage may occur, leading to the most melancholy results. Or the internal recti muscles, on which the strain has been very great, in consequence of the strong convergence which is necessary in the fixation of an object which must be held very closely to the eye, become functionally weak, a condition called muscular asthenopia is developed, which may even lead finally to the unseemly divergent squint. Thus we see that in view of all the possible evils which may endanger the integrity of the eye as an organ of vision, or at least produce very distressing functional disturbance, every measure should be adopted in our schools and elsewhere which may have a tendency to prevent the development of myopia, or lessen the dangers with which it is associated.

Now it is evident from the foregoing that whatever causes undue straining of the muscle of accommodation may contribute to the development of myopia. The rules which should be followed with a view to the prevention of the development of myopia are as follows: The books in which children read should be printed in large, coarse letters. Moreover, the desks and benches should be so disposed that the children are not obliged to sit too low compared to the object, the book in which they read, the paper on which they write. They should be accustomed to write a large hand, with heavy, thick strokes. Drawing, and with girls the learning of fine sewing, knitting and fine work, such as embroidering, are better begun after childhood; and where myopia exists it is better to avoid them altogether. Many cases of asthenopia, in girls, or weakness of the muscles of the eye, manifesting itself in inability to read, write, sew, etc., without unpleasant sensations of pain and strain in and around the eye, take their origin in some piece of fine needlework or embroidery, involving excessive action of the ciliary and convergence muscles. Again, it is of great importance that the object be held fully in front of the face, so that both eyes stand at an equal distance from the point fixed; otherwise, an unequal strain may be brought upon the muscles of the eyes, and thus one or other of them be overtasked. Of paramount importance is sufficient illumination of the object. If the light is

insufficient, the object must be brought too near to the plane of the face, and the muscles of accommodation and convergence strained to the uttermost to produce sufficiently clear images upon the retina.

Statistical evidence coincides entirely with the deductions of theory, the researches of Kohn proving that the percentage of myopic individuals is considerably increased in those schools where there is an insufficiency of daylight, or where the arrangements are such that artificial light must take the place of daylight during a part of the time. Children should use artificial light as little as possible at employments which, like reading and writing, tax the muscles of accommodation and convergence. The development of myopia is especially favored by reading, writing, etc., continuously in dusky places and at a distance from the light. The bent position of the body in reading and writing is also thought to play a role among the factors which produce myopia, on account of the congestion in the upper part of the body which is thus occasioned. Reading during the twilight is dangerous, as the decrease in the amount of light is so gradual that the eye accommodates itself in a certain degree to the imperfect illumination, and the risk of straining the muscles of the eye is heightened with every moment that the occupation is continued.

There is a popular prejudice to the effect that artificial light, as such, is hurtful to the eye. This is not strictly correct. Although even the best artificial light can hardly replace the light of day, yet it is not the artificial light, as such, which is hurtful to a fully developed, healthy eye, but the improper use of artificial light; insufficient illumination of the object, reading at too great a distance from the light, the quality of the light used, etc. A flickering light, for example, is hurtful to the eye, because at every instant the amount of light thrown on the book or paper varies. Hence, the muscles of accommodation and convergence have a tendency, with every change in the amount of light, to change their condition of contraction, and this is productive of fatigue and possibly of irritation. If, however, the artificial light used be sufficient in quantity, and be steady in character—in a word, approximate as far as possible to the qualities of the sunlight—the muscles in question can perform their function without being overtaken or strained.

Allusion has already been made to the condition of hypermetropia or far-sightedness, and it has already been mentioned that in children this condition usually depends upon flattening of the ball, or shortening of its antero-posterior axis. If such an eye were in a condition of rest, if the apparatus of accommodation in such an eye were not called into action, or were paralyzed, parallel rays of light, falling upon the cornea, would be brought to a focus behind the retina. Hence, under such circumstances, even the light of the stars would produce circles of dispersion upon the retina: with such an eye one would not see even objects that are, to all practical intents, at an infinite distance, clearly and distinctly. It is therefore manifest, that a hypermetropic individual must cause his ciliary muscle to contract, even when he will have clear vision of distant objects, for contraction of the ciliary muscle produces increased convexity of the lens, and, as a result, shortening of the posterior focal distance: in other words, the distance from the cornea to the focus, where the rays unite in a point, is shortened so that the image falls on the retina instead of behind it. Now in reading, writing, in short, in all employments involving use of the eyes in short distances, the ciliary muscle of such an eye must contract with still greater energy than does the ciliary muscle of a normal eye, for a certain quota of its power of contraction must first be called into action, in order to produce so much increased convexity of the lens as is necessary to bring parallel rays of light to a focus on the retina. In many children who are affected with hypermetropia, the energy of the ciliary muscle is not sufficient to accomplish that which is demanded of it in reading and writing. Such children are not able to see the letters of a book distinctly without a convex glass, which is simply an artificial lens, increasing according to its value the refractive power of the natural lens which is in the eye. In many cases, however, the ciliary muscle possesses great strength, and thus in spite of hypermetropic adjustment of the eye, clear and distinct vision of near objects is possible. It is very manifest, however, that any of the circumstances which have been alluded to before, as causing undue straining of the ciliary and convergence muscles, would operate in the most hurtful manner in a case like this, in which the very form of the eye renders the amount of work that the ciliary muscle is called upon to perform, very great even un-

der the most favorable circumstances. Where hypermetropia exists, even in a low grade, all the hygienic rules which have been above enumerated should be rigidly enforced.

We frequently find children who are affected with hypermetropia squinting. It is the so-called convergent squint, where the eyes are turned inwardly, which is observed in these cases. The explanation of this phenomenon is as follows: the greater the amount of convergence, that is, the more forcibly the internal recti muscles contract, the easier is it for the ciliary muscle to maintain a high degree of contraction. Hence, hypermetropic children find in forced contraction of the convergence muscles, that is, in squinting inwardly, a means which enables them to see more distinctly and with greater ease in short distances. This is owing to the relations of association subsisting between these muscles. When a hypermetropic child desires to see a small object very distinctly, and finds that by squinting inwardly it can attain its object with greater ease, the false innervation which leads to the squint will naturally be repeated as often as the necessity to see small objects distinctly arises, and thus a squint which was at first periodic or transient, may gradually become permanent. Now it is evident that insufficient illumination of the object increases the strain which is already brought upon the ciliary muscle (when called into activity) by the natural formation of the eye, and that disregard of the hygienic conditions under which the eyes should be used, may thus play an important role in the development of squint in hypermetropic children.

CHARLES KINGSLEY, PARSON, POET AND POLITICIAN.

THE telegraph has brought us the news that English literature is the poorer by the loss of another vigorous mind and sound heart; that "Parson Lot" is gathered into the number of those great and memorable names, whose brilliant record he read us last winter in his lecture on Westminster Abbey.

He was a native of Devonshire, the beautiful seagirt country which his own novels and the *Maid of Sker* have made familiar to all American readers—a land that has played a great part in English history since the Saxons and the Danes wrested it from

the English tribes. In the days of Elizabeth (and of *Amyas Leigh*), it was the foremost of the English shires, the seat of all the great industries, and the native home of the great captains who carried the English flag "beyond the line," and beat back the Spanish Armada. If it has declined since then in comparative importance, it still, like our own New Hampshire, produces men, as may be seen in the Kingsleys and in Rajah Brooke, whom Drake and Raleigh would be proud to own as countrymen.

In Charles Kingsley's life and character the strength and the weakness of the old Norse character are both visible. He had the intensity, the Berserker fervor of the race. He had received an English training in the patient study of the two great literatures of antiquity, but he never drank in anything of the classic repose of Greek beauty and Roman law. He knew the Hebrew prophets and the Christian apostles with a loving intimacy, and singled out the Apostle John for his especial admiration. But he never learnt from Isaiah that "in patience and quietness shall be your strength," nor from Paul to "study to have a quiet mind." He was a fervent, patriotic Englishman, but he never ceased to offend the national instincts of easy and almost indifferent toleration, of which Shakespeare is the most perfect embodiment. He sat for years at the feet of the late Prof. Maurice, the Apostle John of the generation; he borrowed words and phrases from him, and was led by him into the apprehension of truths that moulded his whole life; but the atmosphere of their writings differs as the storm from the calm.

Kingsley lived in a storm and thought in a storm. A small tempest he seemed to carry forever about with him. It was the very nature of the man, who might have found his prototype much more clearly in the Apostle Peter than in either Paul or John. But in spite of some great errors of judgment, the storm was directed to wise ends—was a small fragment of the divine thunderings and lightnings that John beheld enfringing the throne of God.

For instance, his influence throughout his long life was steadily exerted in behalf of the poorer classes of the English people. When a schoolboy at Clifton, above Bristol, he witnessed, in 1830, the popular riots in the latter city, the burning down of a part of that city, and the violent suppression of the riots by the

soldiery. On the following morning he saw the row of mutilated corpses that lay stretched on the street beside the consumed buildings, and bore away impressions that were never effaced from his mind. Their first effect was to make him hate and despise the people then spurred to despair and violence; but as he spent the earlier years of his ministry among the poor and the downcast, and learned the story of their sufferings from their own lips, his opinions underwent an immense change. Without ever giving up the positive part of the Tory creed, without changing a jot the positive convictions that made him a romanticist in politics as well as in literature—while still admiring the middle ages, the strong rulers, the old established institutions, the established Church, and all the other idols of the Tory faith—about 1840, he became practically a Liberal of the most pronounced type. He differed from the ordinary Liberals in looking for other reforms than the Whigs wanted. He had no faith in "salvation by Act of Parliament." Mere political changes would leave the working classes much as they found them. He wished to see a revolution in the whole industrial system, that would remove the power of capital over labor, and make the workman able to stand upon his own feet, as a self-respecting citizen, with a sense of his responsibility to God and his country. In 1848 the storm that swept over the continent was down upon England also. The great Chartist organization was demanding universal suffrage and annual parliaments. Kingsley, with a number of like-minded men, chiefly of the school of Prof. Maurice, formed a party known as the Christian Chartists or Christian Socialists, to agitate for reform in another direction. The Co-operative Movement and the Workingmen's Collegé grew out of their agitation, and are among the most promising signs of the future of the working classes.

Kingsley wrote much and well during this *sturm-und-drang* period. His pamphlet, "*Cheap Clothes and Nasty*, by Parson Lot," was one of the sensations of the day; but his *Alton Locke, Tailor and Poet*, was the fullest exposition of his views. It was at once the best and the worst of his novels—the most full of the sacred fire of indignation and divine wrath, the most sustained and vigorous criticism of things that he hated, and the most abundant in all the faults of taste and style that characterize his writings.

If anything that he ever wrote will live, this book will, yet none of his books is more open to just criticism. And in *Alton Locke* the finest passage is that in which the old Scotchman drags the young poet out into the streets of London, to learn if there was no subject for poetry in the tragedies that were transacting under his very eye.

Kingsley's other novels are all full of life and movement—too full of it to rank high as works of art. *Hypatia* is in some respects the best, as it is his most sustained attempt at philosophy. *Westward Ho* has two grand passages, the scenery of South America and the defeat of the Armada, which atone for its great faults as a story. *Yeast* is the companion picture to *Alton Locke*, the country side of the same general picture of English misery and poverty.

Kingsley's position as a theologian has also been, and with similar exceptions, wholesome and beneficial. He might have been a splendid bigot or a splendid skeptic, but he escaped both extremes. He was, with all thoroughness and sincerity, an intensely Christian minister, full of zeal for the advancement of that kingdom whose advance in his opinion was identical with the advance of mankind in true well-being. The dominant parties of the religious world he would have admitted to be equally zealous for the same good end. But they seemed to him to start from an essentially narrow, and in so far, false conception of its nature, and of the ideal of character that it demanded. They seemed to lack the manliness, the strength, the freedom, the masculine devotion to the bare, naked truth, which the Bible everywhere exemplifies. They drew a line across human life, and called one-half secular and the other religious, and claimed the latter alone for Christianity. They put under the ban one-half the wholesome instincts of mankind. They reduced Christianity to the business of "saving souls," whereas in his view the saving the whole man, body, mind and spirit, from the present hell of falsehood, wickedness, disease and wretchedness, was its true end. He thought that the old Greek culture of the body was one of the heirlooms that paganism has bequeathed to Christendom, and was not to be neglected. This was the meaning of his famous sermon on *Muscular Christianity*, which for years closed the pulpits of his *Alma Mater*, the University of Cambridge, against him.

His theology is preserved for us in essays and sermons, as he wrote no systematic treatises. His sermons are masterpieces of simplicity and fervid directness, as well as of good English. In the pulpit he was thoroughly at home, and no one who has ever read his discourse on the Pharisee and the Publican, or the four on David, will ever forget them. Yet he was not a preacher of the first rank. He takes his place below Donne, Taylor and Barrow, below Irving, Maurice and Robertson, by the lack of sustained power. But he stands above the great mass of those who have added to the volume of this literature.

As a historian he had the same defects as characterize his work as a novelist. He gives brilliant fragments of biography, dovetailed together in chronological sequence, and calls it history. He even formally repudiates the conception of an organic law governing the historical development of the world, and resolves everything into the action of individual will. Will was so dominant a factor in his own life, that the mistake was natural; but it prevented him from writing true history.

Science was one of his favorite subjects, not as a theme apart from his profession, but as closely connected with it. He was never tired of emphasizing the fact that the Hebrew and Christian revelation had furnished the starting point for all fruitful investigation in this sphere—that until men attained in their light to the conception of a universe, not filled with ghosts and monsters, but created and governed by a Father of our spirits, they could have no time for the material facts of that universe. And he especially recommended natural history as an excellent and wholesome study for the young, and worth far more to them than the discipline of the debating society. He probably felt a peculiar personal need of such a quieting discipline, as the wholesome antithesis of his own restless spirit.

His best work was his poetry. He was made for a lyric poet and might have been the Burns of the nineteenth century, had not his overmastering interest in the direct problems of modern society drawn him away to other pursuits. But lyric poetry was the natural expression of all that he thought and felt, and in everything that he has written—whatever its literary form—he writes with the truest power in lyric outbursts of prose. The memory of his novels, when we look back to them in after years, suggests a

hot, close, intense atmosphere, in which we once had spent some hours. But the very qualities that make them thus unwholesome and unnatural might have found a natural vent in song. The few lyrics that he has written are fine specimens of the combined force and beauty of genuine song. Had they been more numerous, his place in the history of literature would have been a larger one.

JOHN DYER.

BIOLOGICAL RESEARCH IN THE UNITED STATES.

THE wonderful extension of interest in the sciences of nature, witnessed by the present century, doubtless marks an epoch in the history of the human race, furnishing, as it does, a criterion strongly expressive of the developmental state of human reason. For ages the mind was content to deal with notions and definitions of natural objects; but now seeks the living contact with the facts, seeking in them for light upon the great questions that life and the universe present for human solution. Recognizing its community of nature with the beings that people earth, air, and water, the mind seeks to interrogate the objective phenomena presented by these, since subjective consciousness yields it no reply. The determination of many men to devote themselves to such a labor, and of many men necessarily otherwise employed, to enter into their labors, is a healthy sign. It indicates that the questionings with which heaven's gate is besieged are more persistent than ever before. It indicates that the logical faculty of the mind, which must be occupied with things of order and consequence, is demanding food more universally than in former days. In some of its aspects, it means that the æsthetic sense is wedded to nobler thoughts; and that strength and beauty shall no longer live apart, but produce a noble progeny in the soul; but more pregnant with hope than all else, it points to the conclusion that men will no longer be fed with lies, but will seek truth, even though it be necessary to abandon the starry heights of doctrine, the green but treacherous valleys of mental indolence, or the tinsel of vanity-fair, in the pursuit.

Those in whom this intellectual hunger exists will have food,

and with demand comes supply; for since civilization produces both flowers and fruit if proper cultivation has not been wanting, so society produces men at the proper time especially endowed to lead or to supply its wants. A lineage of pleasure-seekers will blossom into Boucicaults and Offenbachs; and as certainly will a race of brain-workers put forth Huxleys and Henrys, although the objects of their brain-work may have been other than those now cultivated by their gifted sons.

We Americans are an industrious people. Such intellect as is necessary for successful trading is well developed among us. There is a vast amount of mental energy expended in various directions, but chiefly in that of making money. This is well, not only because necessary, but because a business life supplies a drill, both moral and intellectual, necessary as a foundation for a great people. The intellectual activity thus rendered habitual, and in many instances increased in power, will not remain occupied with the food on which it was brought up. Business presupposes accumulation of wealth, and every day families are emerging from their primeval state of living by the sweat of their brow to independence. Such is the social development of man, and the first stage of education by labor of body and mind has been absolutely essential to his fitness to possess the reward of his toil, the liberation from constant pursuit of the necessities of life, and possession of the control of his own time.

What do our business men picture as the result to their families of the final success of the efforts of several generations of their flesh and blood to accomplish pecuniary independence? Living for an end far nobler than the many who do not provide for the evil day, and who exist only temporarily, and by permission of the forces of the earth and air, do they ask themselves *cui bono?* when all is won. In view of the swift decay that has overtaken many families so soon as their labors produced wealth, their legitimate reward, some may be disposed, ostrich-like, to hide their eyes from the future, or to say with the statesman, *apres moi la deluge*. The progress of men has ever been the same; from nomad barbarism to agriculture, then organized society, then wealth, then what? Decay and destruction have heretofore overtaken nations, and the "scourge of God," the nomad, whether Asiatic or American, has reasserted the supremacy of physical

vigor over physical degeneracy. If this be the prescribed order of things adopted in the plan of the universe, something must be wrong; our destiny, instead of being shaped by the Author of good, is the offspring of evil itself. But the explanation is not far to seek. At our doors the process is repeated in the single family, which is exhibited by nations on the grand scale, and we may well be instructed, and build, as well at least as we know, the bulwarks of our country's future glory.

Doubtless the business man sees his wealthy descendants conducting large business enterprises like his own, but larger, and with capital which will bridge over times of depression and loss; and again *cui bono?* the idler may ask. To support population by furnishing employment; to bring in money and facilitate supply, on all which depends the growth of a country's population. Noble objects doubtless, and all at the foundation of society. So the roots and trunk and branches of the great tree grow deeper and thicker and longer. But flowers of brightest hue will be from time to time put forth, and fruit of choicest flavor for the "healing of the nations." The human mind needs no drill of a business life to induce it to soar into space or dive into earth or ocean. Even the wild beast crouches in terror at the sound of thunder; the birds direct their flight towards the heavens, and the sunflower ever turns its face to the sun. The nomad has his aspirations and the savage his demons. But the business career of the civilized man lays the foundation of the scientific mind; it teaches mathematics in the market and the laws of nature in the field. It tames the imagination to its legitimate use under the guidance of analogy. And this is the drill which has in the recent past directed the mental forces of men into the lines of logic and calculation, and has shown them paths through the labyrinth of mysteries by which they are surrounded. We begin to discover that questions may not only be asked but answered, and that, armed with these replies, the fears and evils begotten of ignorance may be banished from the mind, and the spectres of a former age stopped at the crossing of the new Rubicon, which science has essayed and in part accomplished.

Here we have not only use for wealth but a conservator of wealth. What more worthy object of wealth than the development of that choicest flower of nature, the human mind? What

more noble service than the extension of the power and range of human thought? But more than all, how important to furnish solid food to the minds set free from the routine of business cares; what more important to the state than the furnishing of occupation for active souls who cannot be idle, and whose power for mischief is the complement to their power for good. In the sciences, intellect of every grade may find occupation. The trading talent may yield large income in the field of physics and mathematics; the classifying genius may digest phalanxes and legions, and make a little impression on the universe; while the plainest comprehension, entering zoölogy from the kennel and stable, will from time to time extract or appropriate great truths of the science of life. And from nature up to nature's God is no wide flight of fancy—and yet of little more than fancy. For the broader the apprehension of the creation and its laws, so much the more stupendous and awful looms the nature of its Author, adding stimulus to the sentiment that,

"Not only passive praise thou owest,
Mute thanks and secret ecstasy."

The lessons taught every student of natural science in the field of bodily physiology are familiar enough; but less known and more important are the lessons in mental hygiene with which the law of evolution presents us. And the moral instruction inculcated by the great law of the survival of the fittest is one of the greatest boons to man, and is best enforced by a faithful study of the natural sciences. From what do the young generation of Americans, especially the wealthy, suffer to-day? From neglect of the laws of bodily and mental hygiene; that is, from want of sleep, use of whisky and tobacco in excess, and other modes of expenditure of vital power, which will tell on their own existence and that of their line of the race. From what does society suffer where the law of the survival of the fittest is unknown? From ignorance of the fact that violation of the foundation law of society, the sacredness of *meum* and *tuum*, in person and property, only throws the perpetrator under the millstones of the gods—which, if in some cases they seem to grind slowly, "do grind exceeding fine."

The demand for this class of intellectual food must be met in two ways. Those in whom the demand exists must have opportunities of cultivation either by original investigation or diges-

tion of the productions of investigators; and second, schools of instruction are necessary for the people in whom such tastes have been but little developed. For the accomplishment of the first object, institutions of original research are absolutely necessary; for the second, scientific schools and classes in our educational establishments will accomplish the purpose.

The general appreciation of these truths is proven by the frequent establishment of scientific chairs in our universities and colleges, in spite of the great lack of means of instruction in many of the departments. And such positions will doubtless continue to be created, until a professor of biology will be as essential a person in a college faculty as is the professor of mathematics or classics. The number of these chairs to be filled in the United States in the next few years must be very great. First there are the State agricultural colleges, subsidized by Congress; secondly, the State schools existing by act of Legislature. Then follows the host of sectarian colleges, and the numerous educational institutions endowed by private enterprise. All of these must be supplied with professors of natural sciences within the next twenty years or less.

Where is to be found the supply sufficient to meet this demand? It is true that candidates from the class that use Pallas as a milch cow only, will not be wanting, but will trustees and denominational boards be satisfied with such? It is true that the question in this country often is, is such an one a successful teacher—personal popularity among the taught being an essential element of "success." The question in Europe is, what are the candidate's powers of analysis in the development and investigation of his subject? What has he added to science, and what doctrine has he advanced? Under such circumstances, university and college chairs not only become the support of producers in the fields of knowledge, but a fresh article is placed within reach of the inquirer, and not an old product dealt out by a middle-man to the consumer. Not that truth changes, but that it is ever being more and more exposed to view. So it is that the glimpses of future achievement gained by the real laborer in the field of biology, are such as to stimulate to new exertion both on his own part and on that of the students who may seek his instruction.

Institutions for the prosecution of original research are a neces-

sity to our country at the present time. Such an establishment involves two departments. The first, and essential, consists of the material means of support of the specialist, and supply of material objects for investigation. This material consists, in the case of the physicist, of apparatus and the means of constructing it; for the chemist, of a laboratory with reagents, etc.; and for the biologist, of specimens of animals and plants, with a less proportion of apparatus than the preceding departments require, including a laboratory for vivisection, microscopes, etc. All of the departments require a library kept up to date by prompt reception of the latest works and periodicals. Should the institution have means of publishing results of its investigations, with necessary illustrations, its machinery is complete. The second department, that of lectures, is important, and has been added to most existing establishments of the kind we are considering.

The United States possesses to-day several organizations which are worthily fulfilling their mission in the field of biology, of which the chief is the Smithsonian Institution at Washington. At these points materials for use of original students are continually accumulating, so that investigations into new fields are constantly being undertaken. As a natural consequence, students crowd either to their lectures or their shelves; or, as in the case of the Smithsonian, are its beneficiaries in all the essentials of study, though dwelling at distances of hundreds or thousands of miles. Those in whom the desire for "more light" is sufficiently powerful to draw them aside from the pursuit of power, money, or grosser pleasure, find in these centres a congenial atmosphere, and what is more to the point, find prepared the material instruments of research. First and chiefly, they find collections which they can interrogate, and which yield many an answer to the scalpel, the chisel and the microscope. The only demonstration of the history and behavior of life since its introduction on our globe will be furnished by the science of paleontology; the only standard of comparison for estimation of the life of past ages is the life of the present age; the only basis of analysis and classification of the life of to-day is the science of embryology. Hence it is that biological students can and will only seek institutions rich in collections of fossils, of preserved animals and plants (and not parts

of them only, as shells, skins, etc.), and of embryos in a fluid medium. Such institutions alone will turn out properly-instructed teachers and investigators in these fields. From such institutions only can the public look for real results on any but the smallest scale. And since the science of life is, in the order of thought, but the prelude to the science of mind, and since to both are so closely linked our personal pleasures and pains, our hopes and fears, the interest in them which has sprung into being in our day is not only justifiable, but inevitable. And this interest demands the effective prosecution of these inquiries but just begun, with the most efficient means the world affords, so that in every great centre of population there shall be a centre of continual production.

Nothing is easier than to collect the wild and spontaneous products of earth. Transportation is usually the heaviest item of expense, but this is a small matter in comparison with the intrinsic value of the objects themselves. Judicious collecting requires judgment and some scientific knowledge, and there is a class of men well adapted for it. There is indeed a class of objects, either of comparatively rare occurrence, or, as in the case of fossils, difficult of access, which have already become articles of commerce. In the case of the most valuable class of fossils and minerals, this is becoming more and more the case, so that the time is not far distant when the possibility of forming the museums for investigators will be open only to the wealthy institutions. It is unquestionably true that now is the time to secure material at the least expense, and in many regards the only time when some objects can be secured at all. It is obvious enough that when the field is full of those troublesome parasites, the dealers in objects of scientific interest, it is closed to poorer institutions and students.

The energetic devotion of the officers of the Smithsonian Institution to the accumulations of its vast collections, has resulted in good to every section of the country. Nearly every young investigator in the United States has been in some way supported and encouraged by it. Nearly every centre of investigation has been supplied with material from it, and those who owe their scientific education to the facilities it affords occupy positions throughout the land. The same is true of the Lawrence Scientific School of Harvard. An entire school of biologists was turned out of the

Museum of Comparative Zoology by Professor Agassiz, and his protégés now fill the biological chairs of New England and New York. The Sheffield Scientific School of Yale has brought forth fruit in some of the best of our rising biologists, and its energy and life can never cease to produce like results. To these must now be added the Scientific School of Cornell University, to some of whose professors, at least, time and facilities are granted to make both laboratory investigations and explorations in the field; and the Peabody Academy of Salem, Mass., which is telling on the progress of science in some of its profoundest branches.

The secret of the success of these institutions has been, in the writer's estimation, the constant accumulation of extensive collections of material, both old and new. And this has been due not only to the collections themselves, but to the instruction derived by students in making these collections in the field. In this healthful and attractive occupation, the first lessons in the external relations of nature are acquired. In the handling involved in the arranging of a museum, familiarity with the objects in greater detail is gained. The objection on the score of expense has little weight in comparison with the cost of supporting galleries of art and libraries of books. Prof. Agassiz's large collections in Brazil were made in great proportion by his own students. The Yale parties to the West pay their own expenses. The Smithsonian never purchases specimens, and it depended on personal applications for the great museum accumulated before the law of Congress was passed which required government expeditions to place their collections in its hands.

A much more delicate and difficult question is the administration of such institutions. In common with all schools of learning, there is danger of their falling into the control of dilettanti, idlers, and other classes of incapables. The positions of trust may be occupied by those who only value an institution as an adjunct to their private pursuits, caring nothing for it as a school of instruction. It may be rendered useless by an administration which has no sympathy with the dissemination of knowledge to the people, but who believe that the sciences are only designed as occupations for gentlemen. The dilettanti class, with the best of will, has neither energy nor time to expend on its objects, even supposing that it perceives them. Finally the pure collector, who

looks upon specimens as articles of vertu, will not soil his fingers with dirty dissections, nor tolerate the smells of the biological workshop. While each and all of these classes should be benefited by access to institutions of original research, to place such under their control, is to sink them from the view of the scientific world, and to leave them to the bats and the spiders.

The establishments we have already alluded to are under immediate charge of trustees, who elect and appoint officers. So long as such bodies are alive to the importance of their trusts and are acquainted with the needs of students, such an organization is as near perfection as we can attain, especially if such trust or endowment be so defined by restrictions and directions for its use, as to meet the needs of original investigation. Such an institution would have the strongest guarantee of life and usefulness. But as in all governments by the few, when trustees, from indifference or bias, fail to meet the requirements of the times, nothing but successful rivals will awaken them to their duty. There are several institutions in the country, and among them are included the oldest, which are governed in a totally different fashion. From having been voluntary associations, they have become corporate bodies in which every member has a share in the government. In the most democratic, the officers are directly elected by vote of the members, and the entire tone and usefulness of the establishment is thus determined. It is obvious that there is here an open door for the exercise of other than scientific talents, and that the ambition of persons or cliques has no restriction, save that offered by electioneering exertions. As the best students have not time for such occupations, there is every opportunity for those that have, to assume the management. An improvement on this method is that adopted by joint stock companies, where the stockholders elect a limited number of directors, on whom the conduct of affairs devolves. In this way much better results may be attained, for by the electioneering system above described, any energetic executive is sure to fail.

The prospects for the establishment of institutions of original research in many parts of the United States are improving. Our scientific capital, Washington, is likely to be the seat of a second well-endowed institution of the character of the Royal Institution of Great Britain. The Peabody Academy, at Salem, Massachusetts,

must tell still more visibly on the progress of science. The great Hopkins University, at Baltimore, with an endowment double that of Harvard, is about to establish a botanical chair and garden, with every facility for research, and the other sciences will have an unusual share of means at their disposal. Our own city has, in its Academy of Natural Sciences, the finest scientific club in the country, which could, by judicious changes in its organization, be converted into an admirable institution for the support of original investigation. But pending such changes, will not some of our wealthy citizens endow this great city, once the scientific centre of America, with an institution of this kind? Probably in no part of the Union is the scientific temperament so largely developed as in Philadelphia. Her citizens have ever been and still are called to fill positions under the government, requiring special knowledge; and her medical schools have not lost their prestige. Yet, while our experimental physiologists are almost the only ones in America, and rank with the best of the old world, they have to spend their time in the pursuit of the necessities of life; while we produce more in the field of mechanic art than any other American city, there is no means of support for him who devotes his entire time to the development of the physical sciences. And it ought not to be necessary for those who are capable of production in the natural and biological sciences, to go elsewhere for their education, or draw the material for their researches from the explorations and museums of other localities.

E. D. COPE.

THE GREVILLE MEMOIRS.¹

MR. CHARLES CAVENDISH FULKE GREVILLE, the author of these Memoirs, was great-grandson to the fifth Earl of Warwick, and grandson of the third Duke of Portland, a family connection which assured him early in life a sinecure position in Government service, and in 1821 the post of Clerk of the

¹ Bric-a-Brac Series. Vol. V. *The Greville Memoirs, a Journal of the Reigns of King George IV. and King William IV.* By Charles C. F. Greville, Clerk of the Council to those Sovereigns. Edited by Richard Henry Stoddard. New York: Scribner, Armstrong & Co. 1875.

Council in Ordinary. The latter office he continued to fill for nearly forty years, during all of which time he was necessarily thrown into close contact with the various ministries which ruled Great Britain, and had unusual facilities for forming correct judgments as to the characters of public men.

His own position being unaffected by party changes, he still took a lively interest in politics, and a large portion of his journals, as originally edited by Mr. Henry Reeve and republished here by the Appletons, is taken up with details of the inner working of English parties. Most of these, though more or less interesting to the educated English reader, are very judiciously omitted in the edition which has just been issued by Messrs. Scribner, Armstrong & Co. in their Bric-a-brac series. The book as condensed hardly contains a page which is not full of attractive and amusing matter, and if Mr. Greville is sometimes a harsh critic, he seldom fails to give good reasons for his expressed opinions.

Perhaps there is nothing of higher literary merit in the Memoirs than the passages in which the author deplores the manner in which he has wasted his own opportunities, when comparing himself with some of those with whom he was thrown into social contact at Holland House, and it is a curious example of a posthumous success that the publication of his journals bids fair to make Mr. Greville's name remembered quite as long as many whose fame he envied. We believe there can be little doubt that the popularity of the work will long outlive the excitement which its publication has caused in England, and which has been so warm that Mr. Reeve, the editor, has consented to withhold the volumes relating to the reign of her Majesty Queen Victoria, it is said, under solicitation from very exalted quarters. As the book has had already a sale in London only exceeded in many years by that of *Lothair*, Mr. Reeve can the better afford to wait.

Mr. Greville's birth and belongings were such that he mingled upon terms of absolute equality with people of the highest rank; in fact, during the latter years of his life was an inmate of the mansion of the Earl of Granville, whose family are in the very foremost rank of the most exclusive set in England. He thus enjoyed rare opportunities of forming his judgments of men and manners from personal observation, and though like the Memoirs of Lord Hervey and the letters of Horace Walpole the facts re-

lated refer to a comparatively narrow circle, that circle embraced most of the names illustrious in contemporary literary or political life.

If it had been possible to sink to a greater depth of contempt the character of George the Fourth, these Memoirs would have done it. Of his greater vices the world has heard enough; but it seems incredible that any king of England should have been such a small creature as this man was. Inordinately vain of his person, he had a perfect mania for buying clothes in great quantities, the bills for which he invariably left to be paid by the nation (through the Master of the Robes); yet he never forgot or gave away an article, and would from time to time require his valets to produce some garment which had been out of use for years.

When he died it was said of his wardrobe that it was large enough to fill Monmouth street, and gorgeous enough for Drury Lane Theatre.

Another of the king's peculiarities was, that he always professed to have no money about him, yet left on his death no less than five hundred pocket-books of various dates, each of which contained a number of guineas or bank notes.

Mr. Greville relates many incidents and anecdotes illustrating the king's character, and very admirably sums it up, indicating at the same time the one good quality the Fourth George possessed, and which occasionally led him to act like a gentleman and a prince. Alluding to certain discreditable stories, Mr. Greville says :

“This account corresponds with all I have before heard, and confirms the opinion I have long had that a more contemptible, cowardly, selfish, unfeeling dog does not exist than this king, on whom such flattery is constantly lavished. He has a sort of capricious good nature, arising however out of no good principle or good feeling, but which is of use to him, as it cancels in a moment and at small cost a long score of misconduct. Princes have only to behave with common decency and prudence, and they are sure to be popular, for there is a great and general disposition to pay court to them. I do not know anybody who is proof against their seductions when they think fit to use them in the shape of civility and condescension. * * * * There have been good and wise kings, but not many of them. Take them one with another they are of an inferior character, and this I believe to be one of the worst of the kind. The littleness of

his character prevents his displaying the dangerous faults that belongs to great minds, but with vices and weaknesses of the lowest and most contemptible order, it would be difficult to find a disposition more abundantly furnished."

The statement of the king's personal habits certainly justifies the author's opinion :

" He leads a most extraordinary life—never gets up till six in the afternoon. They come to him and open the window curtains at six or seven o'clock in the morning ; he breakfasts in bed, does whatever business he can be brought to transact in bed too, he reads every newspaper quite through, dozes three or four hours, gets up in time for dinner, and goes to bed between ten and eleven. He sleeps very ill, and rings his bell forty times in the night ; if he wants to know the hour, though a watch hangs close to him, he will have his *valet de chambre* down rather than turn his head to look at it. The same thing if he wants a glass of water ; he won't stretch out his hand to get it. His valets are nearly destroyed, and at last Lady Conyngham prevailed on him to agree to an arrangement by which they wait on him on alternate days. The service is still most severe, as on the days they are in waiting their labors are incessant, and they cannot take off their clothes at night, and hardly lie down."

To William the Fourth we hardly think Mr. Greville does justice. What he esteems want of dignity allied to madness, seems to us the not unnatural conduct of a man unaccustomed, until late in life, to much show of deference, anxious to be popular, of great good nature, but of a quick and high temper. William's passion for making speeches, in season and out of season, doubtless caused his advisers much trouble, but must have been rather gratifying than otherwise to the people addressed.

Forced to submit to having Whig ministers, though himself a violent Tory, it is not strange that the testy old sailor ventilated his wrath by seeing as little of them socially as he possibly could, and once in a while abusing them roundly behind their backs ; but we have it upon undoubted authority that in matters of business the King was scrupulously punctual, and always willing to follow their advice—a striking contrast to his predecessor, who delighted in putting off upon the most trival excuse anything useful, and abusing those who urged him to act.

In short, William was altogether a better man than his brother, and Mr. Greville's synopsis of his character, if even true, is certainly severe.

"William IV. was a man who, coming to the throne at the mature age of sixty-five, was so excited by the exaltation that he nearly went mad, and distinguished himself by a thousand extravagances of language and conduct, to the alarm and amusement of all who witnessed his strange freaks ; and though he was shortly afterward sobered down into more becoming habits, he always continued to be something of a blackguard and something more of a buffoon. It is but fair to his memory at the same time to say that he was a good-natured, kind-hearted, and well-meaning man, and he always acted an honorable and straightforward, if not always a sound and discreet part."

Of Queen Victoria the present volumes have but little to say, though that little is pleasant. The account the author gives of the young Queen's first meeting with her Council, a few hours after her uncle King William's death, cannot fail to make upon the reader, as it did upon her people, a most favorable impression :

June 21st.—The King died at twenty minutes after two yesterday morning, and the young Queen met the Council at Kensington Palace at eleven. Never was anything like the first impression she produced, or the chorus of praise and admiration which is raised about her manner and behaviour, and certainly not without justice. It was very extraordinary, and something far beyond what was looked for. The Queen entered the Council Chamber, accompanied by her two uncles, who advanced to meet her. She bowed to the lords, took her seat, and then read her speech in a clear, distinct and audible voice, and without any appearance of fear or embarrassment. She was quite plainly dressed, and in mourning. After she had read her speech and taken and signed the oath for the security of the Church of Scotland, the privy councilors were sworn, the two royal dukes first, by themselves ; and as these two old men, her uncles, knelt before her, swearing allegiance and kissing her hand, I saw her blush up to the eyes, as if she felt the contrast between their civil and their natural relations ; and this was the only sign of emotion which she evinced. Her manner to them was very graceful and engaging ; she kissed them both, and rose from her chair and moved towards the Duke of Sussex, who was farthest from her and too infirm to reach her. She seemed rather bewildered at the multitude of men who were sworn, and who came one after another to kiss her hand ; but she did not speak to anybody, nor did she make the slightest difference in her manner, or show any in her countenance, to any individual of any rank, station or party.

Mr. Greville's sketches of the Duke of Wellington, Sir Robert Peel, Lord Brougham, Lord Melbourne and other eminent leaders, are remarkably forcible and clear, and his anecdotes and personal recollections of some of the most distinguished literary men and women of his time are numerous and striking. Space not permitting a fair selection from his book, we do not attempt it; but a picture of the ordinary life at Holland House, where he was an intimate and frequent visitor, indicates his style:

"The *tableau* of the house is this: Before dinner, Lady Holland affecting illness and almost dissolution, but with a very respectable appetite, and after dinner in high force and vigor; Lord Holland, with his chalkstones and unable to walk, lying on his couch in very good spirits and talking away; Luttrell and Rogers walking about, ever and anon looking despairingly at the clock and making short excursions from the drawing-room; Allen, surly and disputatious, poring over the newspapers, and replying in monosyllables (generally negative) to whatever is said to him. The grand topic of interest, far exceeding the Belgian or Portuguese questions, was the illness of Lady Holland's page, who has got a tumor in his thigh. This "little creature," as Lady Holland calls a great hulking fellow of about twenty, is called "Edgar," his real name being Tom or Jack, which he changed on being elevated to his present dignity, as the popes do when they are elected to the tiara. More rout is made about him than other people are permitted to make about their children, and the inmates of Holland House are invited and compelled to go and sit with and amuse him. Such is the social despotism of this strange house, which presents an odd mixture of luxury and constraint, of enjoyment physical and intellectual, with an alloy of small *désagrèments*. Talleyrand generally comes at ten or eleven o'clock, and stays as long as they will let him. Though everybody who goes there finds something to abuse or to ridicule in the mistress of the house, or its ways, all continue to go; all like it more or less; and whenever, by the death of either, it shall come to an end, a vacuum will be made in society which nothing will supply. It is the house of all Europe; the world will suffer by the loss; and it may with truth be said that it will 'eclipse the gayety of nations.'"

Equally well worth reading, are Mr. Greville's descriptions of two of his visits to Petworth, the family seat of Lord Egremont, a really noble type of the fine old English gentleman,

"Who, while he feasted well the great, yet ne'er forgot the poor."

Petworth, December 20th.—Came here yesterday. It is a very grand place; house magnificent and full of fine objects, both

ancient and modern; the Sir Joshuas and Vandykes particularly interesting, and a great deal of all sorts that is worth seeing. Lord Egremont was eighty-one the day before yesterday, and is still healthy, with faculties and memory apparently unimpaired. He has reigned here for sixty years with great authority and influence. He is shrewd, eccentric, and benevolent, and has always been munificent and charitable in his own way; he patronizes the arts and fosters rising genius. Painters and sculptors find employment and welcome in his house; he has built a gallery which is full of pictures and statues, some of which are very fine, and the pictures scattered through the house are interesting and curious. Lord Egremont hates ceremony, and can't bear to be personally meddled with; he likes people to come and go as it suits them and say nothing about it, never to take leave of him. * * * * * Lord Egremont is enormously rich, and lives with an abundant though not very refined hospitality. The house wants modern comforts, and the servants are rustic and uncouth; but everything is good, and it all bears an air of solid and aristocratic grandeur. The stud groom told me there are three hundred horses of different sorts here.

May 27th.—On Monday last I went to Petworth, and saw the finest *fête* that could be given. Lord Egremont has been accustomed some time in the winter to feast the poor of the adjoining parishes (women and children, not men), in the riding-house and tennis court, where they were admitted by relays. His illness prevented the dinner taking place; but when he recovered he was bent upon having it, and, as it was put off till the summer, he had it arranged in the open air, and a fine sight it was; fifty-four tables, each fifty feet long, were placed in a vast semicircle on the lawn before the house. Nothing could be more amusing than to look at preparations. The tables were all spread with cloths, and plates, and dishes; two great tents were erected in the middle to receive the provisions, which were conveyed in carts, like ammunition. Plum puddings and loaves were piled like cannon-balls, and innumerable joints of boiled and roast beef were spread out, while hot joints were prepared in the kitchen, and sent forth as soon as the firing of guns announced the hour of the feast. Tickets were given to the inhabitants of a certain district, and the number was about 4,000; but, as many more came, the old peer could not endure that there should be anybody hungering outside his gates, and he went out himself and ordered the barriers to be taken down and admittance given to all. They think 6,000 were fed. Gentlemen from the neighborhood carved for them, and waiters were provided from among the peasantry. The food was distributed from the tents and carried off upon hurdles to all parts of the semicircle. A band of music paraded round, playing gay airs. The day was glorious—an unclouded sky and soft southern

breeze. Nothing could exceed the pleasure of that fine old fellow; he was in and out of the windows of his room twenty times, enjoying the sight of these poor wretches, all attired in their best, cramming themselves and their brats with as much as they could devour and snatching a day of relaxation and happiness. It was altogether one of the gayest and most beautiful spectacles I ever saw, and there was something affecting in the contemplation of that old man—on the verge of the grave, from which he had only lately been relieved, with his mind as strong and his heart as warm as ever—rejoicing in the diffusion of happiness and finding keen gratification in relieving the distresses and contributing to the pleasures of the poor.”

Altogether Mr. Greville's Memoirs will repay perusal, alike for the information they contain, and the amusement they furnish.

EPOCHS OF HISTORY.¹

THE study of history has made great advances in England during the present generation; from being a work of art or of oratory, to be done in good style by a few men of the first class, the writing of history has become an art, difficult indeed of acquirement, but still capable of being mastered by industrious application. Beginning with Carlyle, perhaps, there has been a deeper sense of what history is, and of its importance. The rise of schools of theology, of criticism, and of art, that adopt the historical method of study, or appeal to the past for sanction, has emphasized that importance. At no one time since the days of Bede have there been so many great English historians, as in the second half of the reign of Victoria—Carlyle, Freeman, Froude, Pearson, Grote, Macaulay, Milman, Thirlwall, Coxe, Seeley, Maine, Forster, J. H. Burton, Maurice, Kingsley, Blunt, Palgrave, Cosmo Innes, Neale, May, Masson, Lewes, Leckey, Buckle,

¹ (1) THE CRUSADES. By George W. Cox, M. A., author of "History of Greece," "Mythology of the Aryan Nations," etc. Small 8vo. Pp. xx. 228, with Map. New York. Scribner, Armstrong & Co.

(2) THE ERA OF THE PROTESTANT REVOLUTION. By Frederic Seebohm, author of "The Oxford Reformers—Colet, Erasmus and More." Small 8 vo. Pp. xvi. 242, with four Maps. Same publishers.

(3) THE THIRTY YEARS' WAR, 1618-1648. By Samuel Rawson Gardiner, author of "History of England from the Accession of James I.," etc. Small 8vo. Pp. xxv. 237, with Map. Same publishers.

Bryce, Wheeler, etc., etc. And history as now written is not the pedantic sort of literature that it was fifty years ago. It is broader and more human than when Hallam was its chief light ; it appeals to the most universal sympathies of mankind. Its foremost writers are as ready to compile or edit popular manuals, as to write more elaborate books—as Mr. Freeman's series of text books and the present series of "Epochs" abundantly evince.

The present series differs decidedly from that edited by Mr. Freeman in the eminence of the writers engaged on it. In that case, the ability of the supervising editor is the chief guarantee for the excellence of the work, and we must say that some of the books in the series are disappointments. They differ also in that each of the works in the present series is confined to a more limited theme, which enables each writer to do better work than if he had to condense a whole millennium into a thin volume.

The author of the first of the three volumes already published, has perhaps the keenest analytical head of any of our historians. His destructive criticism of early Grecian history, in both the books that have won him his great reputation, is most masterly. But we think that the present volume, like the later chapters of his history of Greece, show that great power of analytical criticism is not the natural associate of great powers of historical construction and representation. The synthetic, the artistic faculty, is unduly subordinate in Mr. Coxe's mind. In its absence no history of the first class can be produced, for no other spirit can breathe upon the dry bones of the past "that they may live" again. Mr. Coxe's book is clear, careful and exact—readable and instructive. The great popular wars of Christendom upon the Moslem are told with the coolness of a clear-headed spectator, who feels nothing of the enthusiasm of the crusaders, and makes no attempt to put himself in their place. He seems to us to miss an essential fact of the history in failing to connect the movement with the memory of the earlier crescentade against European Christendom, which met its first and greatest defeat at the battle of Tours. It helps us to understand the author's way of looking at the subject that he finds the chief result of the crusades in the organization of the State-system of Western Europe, and in the permanent alienation of the Greek from the Latin Church.

Mr. Seebohm gives us a history of the Reformation, which he

calls the Protestant Revolution. He begins nowhere and ends nowhere, although, of course, he is chiefly occupied with the great events of the early half of the sixteenth century. This indefiniteness in date seems to us objectionable in a book of this series; and we would also object to the title of the book. The Reformation was not a revolution, but the frustration and defeat of a revolution, and the word revolution should not be used by a historian in any loose sense. There were two revolutionary parties in Europe at that time—the paganized humanists, who were overthrowing all the religious convictions of the educated classes, and the Anabaptist and Peasant party, who were striving to turn society itself upside down. The Reformers fought with each as heartily as with the Pope. We believe that Europe owes to them—especially to Luther—the defeat of both. Things had gone so far in Europe that a great change, either an evolution or a revolution, was inevitable. The Reformers took a conservative position: they found in the existing and established order of Christendom the elements of the Christendom that was coming—in its national order, its household order, its Hebrew and Christian Bible, its orthodox creed, its church-going and sacraments, its schools and catechism. They stripped these things—which the revolutionists would have destroyed—of incrustations and incumbrances, and set them in the forefront of the battle. They aimed at no more than a reform of what they thought had been deformed; they were confident—and experience justified the confidence—that the world had not outgrown these.

Another fault that we would find with Mr. Seebohm's book is its lack of unity. He has too keen an eye for second rate men and second rate facts. His earlier study of the group of Christian humanists that gather around the good Dean Colet, and that yearned after a quiet and orderly reformation, such as would make no appeal to the popular heart and conscience, but would be carried out by scholars, kings and popes, has helped to lead him astray here. He does but scant justice to the magnificent personality of Luther, and the profound faith in God that made him master of all situations and of all hearts. For the same reason the great central fact of the Reformation,—that it was a revival of faith,—is not made central. Its mere ecclesiastical, political and social features are dwelt upon with some thoroughness. In

some places, as, for instance, in the account of mediæval scholasticism, Mr. Seebohm writes from hearsay, and not the best hearsay either.

But with all drawbacks, the book is a good, well-written history of the period it takes in hand. The aspects which mere ecclesiastical historians like D'Aubigne cast into the shade, are brought fully into light. At every possible point the story is told to the eye by maps, etc., and quotations from contemporary writers, while, not as numerous as we could wish, are admirably chosen, and contribute very greatly to the vividness of the impression. Had Mr. Seebohm possessed a close acquaintance with Luther's letters and reformatory works, he would have been able to add very greatly to their number. On the whole, the book fills a place in English literature that is pretty nearly empty, and is a piece of careful and admirable work.

Mr. Gardiner's treatment of the Thirty Years' War satisfies us better than either of the others. Like Mr. Seebohm, he has come to the subject with a preparation drawn from previous studies. He is the author of the only good history of England under the first two Stuarts; a book that deserves a popularity that it has not gained, perhaps because of the author's oddity in publishing each part as an independent work. To write this, he must of course have mastered the contemporary history of the continent; and we find that he even made original investigations that enable him to correct the statements of German historians of this period. Of those historians he has made the freest use; and as no part of German history, not even the Reformation, has been the subject of such thorough and protracted discussion, every fact and every person has been thrown into the fullest light.

Mr. Gardiner's history has all the unity, the movement, the vigor of life. He has the advantage of having two heroes brought face to face, with a great host of men high in the second class. His sympathy with men is great and vigorous. He has before him the great epoch of religious conflict, that again, in our own days, awakens universal interest. Not only has he filled an empty place in English historical literature, but he has filled it in such a way as to forestall any other book on the subject, that is not of the highest order, and more full and complete than one of this series can be. May we not hope that he will write such a book himself?

Other books of the series are in preparation. Among the announcements, we notice that Dean Church, the biographer of Anselm, is to write on the Early Middle Ages; Mr. Morris, the editor of the series, is to write on the Age of Anne; and J. M. Ludlow, who, with his friend Tom Hughes, published a volume of lectures on the history of the United States at the beginning of the late war, is to write of the American War of Independence.

The volumes before us are excellent in appearance and in mechanical execution, and it gives us pleasure to see that they are the work of a Philadelphia firm.

REPORT OF THE CONSTITUTION COMMISSION.

THE REPORT OF THE COMMISSION to revise the Constitution of Pennsylvania, made to the Legislature, January 29, 1875. Harrisburg: B. F. Meyers, State Printer. 1875.

The seven gentlemen appointed Commissioners by the Governor last year, pursuant to the mandate of an act of the last session of the Legislature, "to examine and revise the Constitution of the Commonwealth," and to formulate such amendments as they might thereupon deem "advisable or necessary," made their report at the close of January to the General Assembly. They had been allowed about six months for their labor; certainly a period of time adequate to their duty, as they seem to have understood it, and possibly sufficient for the attainment of any object attainable in the premises, so soon after the establishment of the brand-new work thus subjected to their criticism and judgment. If it were worth while to pause in the contemplation of anything remarkable in the history of the constitutions of this country, we might profitably dwell upon the circumstance (singularly enough, an unusual one) of the reference to less than a dozen men, for the removal of its patent defects, of a fundamental chart, not more than a dozen months after its enactment by an overwhelming vote of the electors. The Commissioners have been obliged to look only for provisions palpably defective, or radically erroneous, to the exclusion of others, of which the promise is very bad, but against which experience only can supply practical arguments. But

so much the more plausible appears the objection that, in matters of such grave import, the bulk of an affirmative vote is not any guaranty of the excellence of its subject. The number of the *AYES*, in other words, is not safe testimony to the virtues of the measure which is vociferously carried through. And we think, too, that so much the more plausible appears the doctrine of jurists, that, as legislation should be the work of a few learned men, so the creation of a government dare not be safely entrusted to so many as that few. The gentlemen who have made the report before us could infinitely better have constructed a constitution, than those who have passed into oblivion through the dismal portals of the old church in Philadelphia; and must daily exercise an influence necessarily superior to that of the hundred of thousands of constituents whose solemn work they censure.

Notwithstanding, however, the limited sphere of action opened to them, and the admitted eminence of the individuals of the commission, we are disappointed with their report. They remove some unnecessary words, reconstruct a few awkward passages, and dissipate certain lingual difficulties; but they leave other words, passages, and difficulties to flourish, and hereafter to bear bad fruit. They properly strike out the word *general*, from the third section of the third article; they re-write the eighth section of article ninth; and they obviate a technical (grammarian's) objection to section fifth of article sixteenth, by substituting "*engage-in*," for "*do any*." We need not state more of the changes thus indicated, as they are not of any importance, and would serve simply to illustrate our criticism. And yet they pass by the adjective "*invaluable*," absurdly written in the seventh section of the Declaration of Rights; make no attempt to clear up the fourth section of the same article, pregnant with difficulty in its relation to the closing sentence of the third; and by the light of their own ingenious and destructive criticism leave "*uniform taxes*" more than ever the symbol of an unutterable mystery. It is worth while to mention these matters for two reasons: first, because in the object of the Commission we find warrant for holding them worth mention; and second, because the report of the Commission is certainly the final action which, in this connection, will be had for years, and should, therefore, have been exhaustive.

We must suggest, too, that in its more important work the

Commission is open to the same criticism. Its more important work, as already seen, was necessarily of less volume than its unimportant work; and the fact that a provision of the Constitution was fundamental, was generally, and of course rightly, sufficient to justify its disregard in the present. But this was not always so, as the gentlemen themselves have stated; and, with deference, we think it was less often so than the gentlemen have appeared willing to admit. And here grave examination of their work becomes a duty.

No one will charge that, in the instances in which it has been deemed proper to recommend amendment, there is the least evidence of haste, or of a disregard of any the least inquiry pertinent to the subject in hand; and even in the brevity and simplicity of the paper there must be found relief from the apprehension, not of false ornament, but of theoretical enlargement, sure to gratify the scholar, but just as sure to endanger the cause at Harrisburg. Of course the statesmen of our day must be philosophers; but they must make a show of submission in practice to the vulgar dogma that philosophy and common sense are things with a difference, and the former utterly misleading and valueless. Still, in appreciating the efficacy of directness of speech and of colloquial looseness, the statesmen of our day may have regard to certain canons of taste, which they are allowed to observe even in moments of the wisest subserviency to the masses; and at the instant of directing our attention to the serious reforms suggested in the Report, we may refer to the homeliness of speech wherein they are couched. To be frank, indeed, we have found the first passages of the Report more inaccurate than even homeliness warrants; and although the matter is only a matter of words, it is not unbecoming to glance at it. In speaking of the work of the late convention, the Commissioners say: "*There are features upon which differences of opinion exist, but which, having been settled by the popular vote, at least for the present, it is thought wise to be permitted to remain untouched, until time and experience shall have exhibited their utility or inutility.*" There may be suggested a doubt as to whether the *features*, or the *differences of opinion*, have been settled by the popular vote; and in deciding for the former, we are forced to accept a phrase of inadequate significance. How can be parsed "*it is thought wise to be permitted to remain untouched*"?

The reference to time, in conjunction with experience, as an agent to "exhibit" the *utility* or the *inutility* of the *features* is incorrect; for it is clear that the real agent must be experience, although the idea of experience involves the idea of time, as a subsidiary consideration. And the era at which the *features* may be *touched* should have been referred to the demonstration by experience of their *inutility alone*. Certainly when experience makes manifest their *utility*, the season for touching them will not have arrived at all. To characterize "the Judiciary article" as "*the least unanimous in its adoption by the convention*," is to surrender too completely to the prejudices of men, who might say what was meant, but could not indicate how, accurately, what was meant should have been said. The expressions "*true spirit and intent*," "*mere surface reason*," "*a surface thought*," may pass unheeded even in the connection in which they appear; but it would be hard to understand how a surface thought, *qua surface thought*, could be "pleasant," or why, instead of partaking "more of demagogism than of statesmanship," "*a mere surface reason*" could partake of either.

The amendments proposed number twenty, of which six are either merely verbal, or not necessary on another ground. Of those merely verbal, we find illustrations on pages 18 and 19:

"Article XVI. Section 5. Strike out the words '*do any*,' in the first line, and insert the words '*engage in*,' in lieu thereof.

"The section will then read:

"No foreign corporation shall engage in business in this state without having one or more places of business, and an authorized agent or agents in the same upon whom process may be served.

"*Remarks.*—The purpose of this amendment is to obviate an interpretation which would prevent a foreign corporation from doing any *single* act relating to its affairs without complying with the requirements of the section. A corporation not intending to engage in business, may find it necessary to do a particular act not within the mischief to be remedied."

"Article XVII. Section 9. Amend by inserting the words '*or extended*' between the word '*constructed*' and the word '*within*.'

"The section will then read:

"No street passenger railway shall be constructed or extended within the limits of any city, borough or township, without the consent of its local authorities.

"*Remarks.*—The purpose of this amendment is to embrace a case as clearly within the evil to be remedied as that now provided for in the section. An existing passenger railway, constructed with the assent of the city over certain streets, may, without its assent, be extended to other streets, to the great injury of the public," etc., etc., etc.

Of amendments not necessary on other grounds, we find illus-

tration in that proposed for Section 9, Article V. In this instance the Supreme Court has already interpreted the Constitution ; and the Commissioners favor a more careful expression of the intent rendered in the interpretation, so as "to give stability" to the view of that tribunal ; a suggestion for a scheme of reciprocal support, on the part of the Supreme Court and the fundamental chart of the state, which cannot be analyzed with gravity. Every enactment must suggest doubts, and must therefore require judicial application. But if the doubts are duly settled by the highest judicial authority of the state, it would be a waste of time to rewrite that clause of the enactment from which they sprang. The stability contemplated would already have been attained, save as against a later bench, regardless of the doctrine of *stare decisis*.

Of the fourteen amendments recommended, which are substantially valuable, the most important bear upon the Judiciary Article ; and, indeed, that article has been found to require more attention than any other, since eight of the fourteen have relation to it. The sixteenth section, providing for the restriction of the votes of the people in electing judges of the Supreme Court, is condemned entire. The fifth section is so altered as to constitute the business of a given district, and not its population, the basis of the calculation of the number of courts required therein, to prevent a failure of justice. The third section has been widened, to restore so much of the original jurisdiction of the Supreme Court, "limited by the convention, probably," says the report, "to lessen" the labors of that tribunal, as seems to be absolutely necessary, and certainly to give it due power to issue writs of *mandamus*, *quo warranto* and *injunction*. These provisions are designed to work radical reforms in the defective reformatory chart. The others which relate to the judiciary are not so weighty ; three of them being merely precautionary, as it were, aiming at precision of expression where the meaning may now be gathered, and is approved ; the last two providing for an increase of salaries during a term, and for a power of appointment of court officers.

The article on private corporations is deprived of its provision for cumulative voting in the election of directors or managers, upon ground that is excellent in effect, but singularly ill chosen, if we may regard the first and more labored reason given by the Report as deemed to be the best.

The articles upon the Legislature and Legislation receive what we must believe to be, by the light of the concluding remarks of the Commissioners themselves, a merely passing attention; and this, not because so slight a regard for them may suffice to remove their imperfections, but rather because the doubts which they engender are so portentous that the gentlemen have preferred to leave to experience the demonstration of evils, to them immediately apparent, only curable at the expense of pretty much the whole text. They dare hardly undo in chamber counsel what even such wise judges as themselves seem somewhat to respect in the vote of mere numbers, impelled by mere clamour. So, also, notwithstanding the good that they have there suggested, may be said of the article upon the Judiciary. The radical vice of that article is not aimed at, although very admirably exposed. The Commissioners call the attention of the legislature to the condition of the Supreme Court lists, declaring that "it is evident the Court cannot keep up with the business of the State,"—that "the increase in the number of Judges will add nothing to the dispatch of business,"—that "some remedy must be devised, else there will be denial or a delay of justice, contrary to the eleventh section of the bill of rights." But they propose no remedy whatever. They likewise call attention to the subject of elections, and reveal a danger;—to go no farther. And they condemn the exclusion of special legislation, showing how, in reality, by that exclusion the evil had in view is not crippled at all, that "a general law for a special purpose is the worst form of special legislation," and yet, while destroying the public confidence, they make no effort to reconstruct the barriers of the public safety.

To us, we confess, this takes the aspect of a neglect of the three cardinal principles of government, which had been disregarded, or ineffectively recognized, by the Convention of 1873, and the upholding of which we thought to be specially the object of the appointment of the seven able men who have just closed their labors. And we cannot but fear that their work, as we have already said, will be taken as final for many years, and that, accordingly, much as they themselves seem to desire it, no other amendment will be secured. In any event, it would have been well, in asking the people to vote for changes, to have placed before them a scheme for their protection from an immediate denial

of justice, and from a form of legislation worse than special legislation itself, in assuring them that justice was denied them, and that they were without safety from that most pernicious of all forms.

NEW BOOKS.

REMAINS OF LOST EMPIRES: Sketches of the ruins of Palmyra, Nineveh, Babylon, and Persepolis, with some notes on India and the Cashmerian Himalayas, By P. V. N. Myers, A. M., Associate author with H. M. Myers, of "Life and Nature under the Tropics." Illustrations. 8 vo. Pp. 531. \$3.50. New York: Harper & Brothers.

We join the writer, a young American traveler, at Damascus late in the fall of 1871, and leave him at Calcutta at the close of the following summer, having in the meantime made the tour of the places named on the title page of his book. The volume opens with an interesting account of an excursion into the heart of the Syrian desert to the ruins of Palmyra, the once proud capital of Zenobia, the "Queen of the East." Retracing our steps, we take the caravan route leading from Damascus to Aleppo, and proceed northward through the historic vale of Cœle-Syria, passing on our way numerous monuments of the extinct civilizations—Assyrian, Greek, Roman, Saracenic—which have here successively held domination. From Aleppo our course lies across the Mesopotamian Plains to Mosul. Tarrying here a sufficient time to explore the ruins of Nineveh on the opposite bank of the Tigris, and to enter the passage-ways opened by Botta and Layard, we resume our journey, descend the Tigris to Bagdad, and explore the site of ancient Babylon, and then pass on to the old Chaldæan ruins on the lower Tigris. At Basrah we take the steamer for Bushire, the principal sea-port of Persia, whence we make a caravan excursion to Shiraz and the magnificent ruins of Persepolis. Returning to Bushire, we again take the steamer and proceed to Bombay. The spring is already far advanced and the heat has become intolerable. In accordance with our programme, we hasten to leave the burning plains of lower India and seek a cool retreat in the delightful vale of Cashmere, which lies far to the north, nestled among the Himalayas. Here, in a region whose natural beauties the author assures us have not been exaggerated, are spent the hot months of May and June, after which we descend into the plains and begin our exploration of the "Land of the Vedas," following the course of the Jumma and Ganges past the cities of Delhi, Lucknow and Benares to the sea.

When to this outline of the narrative we add that it is written in a pleasing style and is the work of an intelligent and appreciative, if not enthusiastic, explorer, enough is said to show that the volume is one which will fully repay perusal. Indeed, it is more than this. The reader who is interested—and who is not?—in the researches which have within a few years unearthed and deciphered those astonishing memorials of an almost forgotten civilization which once flourished along the Tigris, will find this volume a convenient hand-book of Oriental discovery and of Oriental history, so far as a knowledge of this is necessary to a right understanding of the relation which the various ruined cities sustained one to another and of their relative antiquity. The writer has aimed at a much higher work than a simple personal narrative. His aim has been not merely to present to the reader a picture of these ruined places as they now appear, and of their geographical surroundings, but by supplementing his own observations by the statements of ancient historians, and especially by the results of modern research, to give some conception of the marvelous drama which has in times past been enacted in this now degraded and almost depopulated land—to trace by the light of contemporary monuments the surges of prosperity and decadence which have successively swept it from end to end.

The closing chapter contains some thoughtful remarks on "Progress in the East;" and at the end of the volume is added, in the form of an appendix, a valuable paper on the "Ancient Glaciers of the Himalayas," the result of the author's exploration of the valleys which open laterally on the Vale of Cashmere.

MANUAL OF MYTHOLOGY: Greek and Roman, Norse and Old German, Hindoo and Egyptian Mythology. By Alexander S. Murray, Department of Greek and Roman Antiquities, British Museum. Reprinted from the Second Revised London Edition. With 45 Plates on tinted paper, representing more than 90 mythological subjects. Crown 8vo. Cloth. Pp. 352. New York: Scribner, Armstrong & Co. 1875.

Such a book as this has for some time been needed. The old hand-books of Mythology have, within a few years, grown exceedingly old, and new books on the subject have mostly been in the interest of this or that theory of Comparative Mythology, and are therefore not suited for use as books of reference. In its present shape, with the chapters on Northern and Eastern Mythology, added to the revised London edition, of which this American edition is a reprint, it forms a hand-book which for compactness and completeness is without a rival among works of its class. It is no easy task to compile within the limits of three hundred and fifty pages such a selection of mythological tales almost infinite in

their variety, and almost inextricably interlaced with one another, as shall serve all the ordinary wants of the admirers of ancient literature and art; yet this task has been accomplished by Mr. Murray in a manner which reflects great credit upon his skill and judgment. The tales of gods and heroes, as these tales were familiar to ancient poets and artists, are told in language concise without being encyclopedic, and with as little repetition as is possible; and in the case of some of the more popular legends there have been added brief accounts of the most memorable works of art in which each deity or hero is or was represented. We have been particularly struck with the chapter on the Demigods, or Heroes of the Greek Mythology, the legends of whom have been thrown into the form of a continuous narrative, beginning with the story of Prometheus and ending with the return of Odysseus Ulysses to his native Ithaca. Even those who are familiar with the detached legends will find their mutual relation and interdependence set forth with an art which gives them a new interest and significance.

In this connection we may notice an innovation, the wisdom of which may be questioned in the case of a book designed for the use of general readers rather than of students of mythology, viz: the substitution in the Greek myths of the Greek spelling of names instead of their more familiar Latin forms. Such names as *Askanios*, *Hekabe*, *Lynkeus*, *Narkissos*, *Okeanos*, *Kyklopes*, *Kybele*, *Kassiopeia*, will be likely to occasion some perplexity to the reader unacquainted with Greek who is hunting up the meaning of an allusion found in an English poem, or in an English translation of a Greek or Roman author. The innovation might be more easily defended had it been adhered to throughout. But while it has been generally adhered to, we meet occasionally with a Latin form, as *Helena*, and with such mongrel forms as *Japetos*, *Jokaste*, *Dioskuri*, and one is at a loss to determine why *Socrates* should appear with his familiar look, while another Greek of equal celebrity is introduced as *Pheidias*.

A blemish much more serious, and one which is hardly excusable, is the omission generally, although not in every case, of the marks of quantity which determine the position of the accent in proper names. Through this oversight the reader is left in helpless indecision as to the correct pronunciation of such oft-recurring names as *Proserpina*, *Semele*, *Dionysos*, *Okeanos*, *Uranos*, *Orpheus*—names not infrequently mispronounced—not to mention a host of less prominent names for which no general rules of quantity can be given.

Thus far we have spoken of the book only as a manual, which in its strictly limited scope has no concern with the origin or the meaning of myths. Compilers of such books, however, have rarely confined themselves to a bare recital of the legends with

which they deal, but have felt it incumbent upon them likewise to expound and interpret the hidden import and dark passages of fable. In this department of mythography fancy has hitherto run riot, and with what impotence every one acquainted with the recent discoveries of Comparative Mythology is aware. In this branch of his subject Mr. Murray has introduced a change, which constitutes not the least valuable feature of his book. Although not himself a Comparative Mythologist, he has sought to base his work, so far as it exceeds the bounds of a pure manual, upon the well-established results of this new science; and, although we here and there detect opinions and conjectures which no student of the new school will endorse, whether he maintains the "Solar" or the "Meteoric" theory, this portion of his work will on the whole meet with general acceptance. It is at any rate a great point gained, that we now have a manual in which one is no longer confidently assured that, for example, the "Apples of the Hesperides" were oranges, that at Colchis the natives had a way of catching golden sand in fleeces, or that the hundred eyes of Argo merely symbolized the ceaseless vigilance of a cowherd.

MALCOM. A Romance by George Macdonald. Crown, 8vo. Pp. 280. Price, \$1. Philadelphia: J. B. Lippincott & Co.

This magazine was the first to predict the wide popularity that George Macdonald has achieved in America during the last few years, and to point out the especial beauties of his earlier stories. We are obliged to say that his late stories do not sustain the promise given by *Alec Forbes*, *Guild Court*, *Robert Falconer*, and *A Quiet Neighborhood*. Beginning with *David Elginbrod*, Mr. Macdonald evinced a disposition to rely too much upon the unusual and the startling. *The Portent* and *Wilfred Cumbermede* carried the fault farther, and now in the last of his books, *Malcom*, we have a plot in the highest degree artificial and unnatural. Yet the book is one of very great power and interest. Every one who begins it will persevere to the end. As compared with *Wilfred Cumbermede*, the book is even cheerful and sunny; and there are characters in it, such as Miss Horn, the woman who has no feelings, that are not unworthy of a place beside Thomas Crann and Cosmo Cupples.

Of course there is one character who is the Mentor of the story—who represents Mr. Macdonald himself and delivers his views of life and the universe. In this case it is the parish schoolmaster, whom the Presbytery casts out as a heretic. But in hearing him talk we have an uneasy sense of the anachronism of putting the Broad Church views of M'Leod Campbell and Thomas Erskine into the mouth of a man of the eighteenth century—that being, we understand, the era of the story. And, furthermore, the con-

trast between the man of broad views and intense piety on the one hand, and the Presbytery on the other, is one that Mr. Macdonald has drawn too often. It is the man's portrait of the lion, that suggests a companion picture—the lion's portrait of the man. The Calvinistic theology of Scotland, in the actual popular apprehension of it, was and is by no means the depressing, harrowing belief that Mr. Macdonald takes it to have been. Whatever the logical consequences that may be drawn from this or that doctrine, it must be remembered that those consequences were very rarely drawn by anybody. The human mind—among its happy inconsistencies—has a wonderful gift of stopping at the premises without going on to conclusions.

That a few men, of more than the ordinary reasoning power and a constitutional tendency to hypochondria (no unusual accompaniment of great mental gifts), did follow up the Calvinistic creed to its last results, and either walked in darkness all their days, or fought their way out of it, is true enough. That Mr. Macdonald, who in earlier life left a pulpit of the Scottish Establishment for conscience' sake, was one of this latter class, we have reason to believe. He writes of hypochondria as no one has written since the Brontés died, and in that wonderful but enigmatic picture of the inner life of a mind, *Phantastes*, its shadow plays a part.

Malcom, the hero of this story, is the son of a Scotch Marquis, born during his father's absence from the country and before his accession to the Marquisate. His brother, the then Marquis, spirits the child away, and reports both it and the mother to be dead, so that the father marries again, and returns years later with a young daughter. He finds his own son living with an old highland piper—the most striking figure of the whole book. Knowing nothing of his origin he hires him as a servant, and by this and other means Malcom is thrown into very close contact with his half-sister, and nearly falls in love with her. The Marquis, through Miss Horn, discovers his relationship to Malcom, and dying of gangrene, brought on by refusing to have an injured limb amputated, leaves Malcom his estate by recognizing him as his lawful heir. What the heir does with it we are to find out in another book.

One of the most striking parts of the book is the picture of a revival of religion, that breaks out among the fishermen, and which gives Mr. Macdonald a chance to express his views on that subject—*apropos* of the labors of Messrs. Moody and Sankey, perhaps. Next to the old piper, the most original conception in the book is the "mad laird," part of whose story, especially his seeing "the bonny man" at the sacrament, is based on fact.

On the whole, Malcom is an interesting book. No one who

reads it, we think, will fail to look for the sequel of the story. Yet Mr. Macdonald, we are sure, has done better work in the past, and is capable of doing better in the future.

JUSTIN HARLEY. *A Romance of Old Virginia.* By John Esten Cooke, author of the "The Virginia Comedians," "Surry of Eagle's Nest," "Dr. Vandyke," etc. Illustrated by W. L. Sheppard. Philadelphia: Claxton, Remsen & Haffelfinger. 1875.

Justin Harley is a story of colonial times in Virginia, but since chance allusions to knee-breeches and to royal governors alone fix even the century for the reader, it is in no sense a reflection of those times. The tale is full of melancholy and mystery, from which every one emerges at the end into unclouded and intelligible happiness.

We should be at a loss where to place this work if not in the class of mystery novels, which Mr. Cooke condemns in the preface. The sole interest is in the plot, which has the merit, rare in such novels, of developing itself without bloodshed or crime, though the illustrations, violently criminal and as much out of perspective with the story as with the rules of art, would lead one to expect dreadful deeds. There is no fine development of character, no strong point in the book.

Hawthorne makes the stately Governors of Massachusetts and the stern Puritans live again for us, and Irving has made the Dutch heroes of New York familiar friends, but we are indebted to an English pen alone for our pleasantest sketches of Virginia in the past century. It is to be regretted that we have not more works that give the salient points of the Southern life that has but just passed away. The influence of colonial days remained longer in Virginia than in the North. It exalted the privileged few, who, in spite of their rare cultivation, sympathized with the spirit in which Governor Sir William Berkeley, in 1671, thanked God that Virginia had neither printing nor free schools. "God keep us from both!" was his honest prayer; and two hundred years worked little more change in the views of Virginia proprietors than the mode of expressing them.

THE PHANTOM OF THE FOREST. *A Tale of the Dark and Bloody Ground.* By Emerson Bennett. 12mo. cloth. Pp. 503. Price, \$1.50. Philadelphia: Claxton, Remsen & Haffelfinger.

There was a time when every boy in the land, ourselves included, would have hailed the appearance of this book, or of any other by the same author, with rapture, and would have sat up to ever so much o'clock at night, and, we fear, have neglected lessons and play, until the last page was conned. We hope and

think from our knowledge of boys of the present day that that time has gone, and that there are few nowadays who would care to spend a dollar and a half on this kind of literature; a dime edition would no doubt have paid the publishers better. The book is so well described by the title that we need not try to enlighten our readers much further as to the subject of it. The "Dark and Bloody Ground" is Kentucky, the time soon after the Revolutionary War; the actors are principally backwoodsmen and Indians, with a young artist traveling for pleasure, and a lovely maiden journeying to meet her father, a colonel in the army, who is stationed in the Far West of that period; and the captures and escapes of these two constitute the theme, the introduction of a supposed spirit—the Phantom—adding zest to the excitement. There is nothing so bad in the book as to make it a subject for parental confiscation, if children can be found who wish to read it; but what must be the condition of the brain of the man who writes a series of such rubbish, is really sad to think of.

CHECKMATE. By J. S. Le Fanu. Author's Illustrated Edition. Pp. 181. Price 75 cts. Boston: Estes & Lauriat.

In order to exhibit the monstrous features of this book, a bare outline of the life of the Mephistophelian eyebrowed hero, Walter Longcluse, will suffice. He is introduced as a millionaire holding a somewhat uncertain position, yet a favorite guest in the best society of London. Behind him, is a dreadful record of crime, with more impending.

Mr. Le Fanu has hit upon an entirely new genus of villain. The reconstructed Yelland Mace, robber and murderer, began life in a new and not improved character as Walter Longcluse, gentleman and millionaire. This we shall leave to the Prussian physician, Baron Vonboeron, to explain in his own words as he unfolds the mysteries of his calling in life.

"I drew back the skin over the bridge, and then I operated on the bone and cartilage, cutting them and the muscle at the extremity down to a level with the line of the face, and drew the flap of skin back, cutting it to meet the line of the skin of the cheek. * * * I removed at the upper end of each eyebrow, at the corner next the temple, a portion of the skin and muscle, which being re-united and healed, produced the requisite contraction and thus drew that end of each brow upward. * * * The rest is done by cutting away two upper and four under teeth, and substituting false ones at the desired angle."

Longcluse, fresh from murder No. Four in Paris, on the person of the treacherous Baron, is arrested in London on charge of murder No. One, and dies a suicide—Checkmate.

Since the knavish tricks are all confounded, we cannot com-

plain of the morality of the book, but we should have looked for better things than the coarseness of this expedient to chain attention from an Irish gentleman and a representative of the Sheridans and Le Fanus.

Taine says that the practical English mind demands from the novel "the amelioration of man and society." With this end in view a writer may go very far and yet carry the sympathy of his readers with him. We are not revolted when Thackeray reads our inmost hearts and lays bare our littlenesses, and we are profited if the reading prompt us to still higher motives and closer self-examination. His bad men and women reach this end which Taine proposes, in helping all who have the courage to see in themselves the roots of that selfishness which is the beginning and end of sin.

THE MAID OF ORLEANS. An Historical Tragedy. By George H. Calvert. New York: J. P. Putnam's Sons. 1874.

Among recorded inspirations, not in the prophetic sense, but such as have enabled individuals to work great revolutions, none is so extraordinary as that of Joan of Arc. Schiller made it the subject of one of his best dramas, and now Messrs. Putnam's Sons introduce Mr. Calvert's conception in a dress (imitation vellum, with the Maid's coat of arms on the cover, tinted paper and perfect print) which will secure Joan from another burning. We find it hard to give a judgment on the play. It is not powerful, interesting or instructive, and yet it is, a thing to be encouraged in our literature, elegant and scholarly. We are inclined to hazard a more difficult critical judgment, and to say after reading his work, that we like the author. If he is not thoroughly refined, he is very unlike his writing. The only phrase that even savors of vulgarity, in the 134 pages of the book, seems shockingly out of place in his mouth. Lord Suffolk, being hard pressed by a French soldier, disdains to yield himself to less than knight, and so takes asylum in one of those fictions which have always been absolutely satisfactory to the English mind, by dubbing his captor Sir William Regnault before handing over his sword. Now this conquering William, in telling the story to his sergeant, receives for answer—

"By Jove!
You're in luck, Bill,"

which gives the reader a shudder. It is no small thing to feel that you are in the company of a man of clean mind.

No critic can measure the faculty that enables real poets to choose language sufficiently strange and unused to chain the attention and produce a more vivid picture on the mind. Shakespeare did this as everything else to perfection. No doubt he put

his strong thoughts into words not so familiar as to be commonplace even in his own day, and every subsequent change in the English tongue has invigorated the immortal dramas. It is just this sort of strength our author aims at and comes short of. One who has good command of similes does beautiful work, and he who attempts them unsuccessfully produces a sickly dose. But the strength of style is in metaphor, and when a writer reaches up to that spirit and fails of it, his work has the flavor of overstrain and labor. Now we consider this Mr. Calvert's mistake. Take two lines from a speech of Alençon (p. 31), saying if he were disposed to smile at the Maid angels would—

"With a blow from their invisible hands,
Smash on my lips such smile—a smile sardonic,
While prostrate France gasps forth ensanguined groans."

A spirit smashing a smile with an invisible hand to the accompaniment of ensanguined groans from a prostrate nation. The analysis of the thought, if it were necessary to go so far, shows how grotesque the idea and the words are. Then, on p. 94, he speaks of the "yaward" gleam of her banner, at which the intelligent reader lays the book down to hunt up the word in the dictionary, and will not be mollified by learning that it is to be found in Shakespeare. On p. 118 strength is not gained by calling the Maid "the greatest she of history," an expression that reminds one of the heated vocabulary of Sorosis. On p. 121, Joan, who has been developed throughout as a modest, pure country girl, self-assertive, even active only just in proportion as she hears the heavenly voice, says of her judges—

"I'll beard
The tigers in their very den."

The speech is out of all harmony with the inspired little shepherdess; it comes straighter from the stony hall of Douglas: and besides, we do not believe a tiger has any beard to speak of.

ISSUES OF THE AGE; or, the Consequences involved in Modern Thought. By Henry C. Pedder. Pp. 175, 8vo. New York: Asa K. Butts & Co. Philadelphia: J. B. Lippincott.

Mr. Pedder is a very earnest man, who has been, we infer from his tone of statement, brought up in the orthodox faith, but has revolted from it, without giving up what he regards as the essentials of Christianity. He is a come-outer, but he means to leave nothing behind him that is worth bringing out. A pure theism, a highly ethical conception of life and the universe, and an intense moral enthusiasm, are among the things that he cannot give up. But other things he accepts as not less authentic to him than these are. Men's minds have been busy with the details of the old orthodoxy, and have found some of them morally revolting, others

clearly incredible; science has given us new facts, which cannot be reconciled with the old creed; and there is in general a drifting away from the old stand-point as a narrow and an incomplete view of the universe. But that drift is a progress, a well earned and highly desirable progress, and the more we have of it the better. This is the general content of his book, and in view of the more sweeping skepticism which now claims to be "modern thought," we are agreeably surprised at the extent and the kind of his conservatism. In other words, Mr. Pedder represents one of the many forms of compromise between "the old and the new faith," between dogmatic Christianity and naturalism. He stands up with James Martineau, F. P. Cobbe, Theodore Parker and W. Leckey, for the ethical context of the old creed, without wishing to preserve and perpetuate its dogmatic form.

We think his book is open to criticism on many points of detail. He assumes, for instance, the theory of creationism, in his discussion of the doctrine of original sin, and denounces the dogma as involving the position that God is the author of evil. But the old orthodox theory of traducianism involved no such consequences. In its view, God was no more the author of sin because the children of sinful parents are born sinful, than because he sustains sinful beings in existence and gives the murderer the physical power by which he strikes his victim. Mr. Pedder—whose honesty and candor are beyond impeachment—should remember that it is not worth while to refute any but the best possible statement of an opponent's case, and that it is the first duty of the controversialist to find out what that is. Furthermore, he appeals to science in his discussion of this doctrine, as uniting with him in the rejection of it. But since modern science leaves no room for the conception of any sort of sin, it rejects the *species* because it denies the *genus*; that is, wherever it assumes its own competence to form an adequate theory of the universal. Mr. Pedder uses its denial only in part. But if the conception of sin be admitted as valid, as representing anything real, then all the teaching of science upon the indestructibility of force; and upon the laws of hereditary descent, go rather to confirm the old dogma than to discredit it.

Mr. Pedder shows in his pages the fruits of wide and thoughtful study. His style is somewhat too ornate, and lacks the classic repose. But his book is very readable, and is worthy of the attention of those whose business it is to know what their fellow-men are thinking and saying on these subjects. That it presents adequate solutions of the questions it raises, we cannot see.

BOOKS RECEIVED.

Half-hour Recreations in Popular Science. First Series. Selected and edited by Dana Estes. Pp. 478, price \$2.50. Boston: Estes & Lauriat; Philadelphia: J. B. Lippincott.

The Ancient City: A Study on the Religion, Laws, and Institutions of Greece and Rome. By Fustel de Coulangés. Translated from the latest French editions by Willard Small. Post 8vo., pp. 259, price \$2.50. 1875. Boston: Lee & Shepard; Philadelphia: Claxton, Remsen & Haffelfinger.

My Story: A Novel. By Mrs. K. S. Macquoic, with illustrations. Paper, pp. 189, price \$1.00. New York: Appleton & Co.; Philadelphia: Porter & Coates.

Manual of Mythology: Greek and Roman, Norse and Old German, Hindoo and Egyptian Mythology. By Alexander S. Murray. Reprinted from the second revised London edition; with 45 plates on tinted paper, representing more than 90 mythological subjects. Crown 8vo., pp. 368, price \$2.25. Messrs. Scribner, Armstrong & Co., New York.

The Communistic Societies of the United States, from personal visit and observation; including detailed accounts of the Economists, Zoarites, Shakers, The Amana, Oneida, Bethel, Aurora, Icarian and other existing societies, their religious creeds, social practices, numbers, industries, and present condition. By Charles Nordhoff. With illustrations. 8vo., cloth, pp. 439, price \$4.00. Harper Bros. & Co., New York. 1875.

Politics for Young Americans. By Chas. Nordhoff. 12mo., cloth, pp. 259, price \$1.25. Harper Bros., New York. 1875.

Remains of Lost Empires: Sketches of the ruins of Palmyra, Nineveh, Babylon, and the Cashmerian Himalayas. By P. V. N. Myers, A. M. Illustrated pp. 531. Messrs. Harper Bros., New York.

Ismailia: A narrative of the expedition to Central Africa for the purpose of suppressing the slave trade. Organized by Ismail, Khedive of Egypt. By Sir Sam'l Baker, Pasha, M. A., F. R. S., F. R. G. S. With maps, portraits, and upwards of fifty full-page illustrations, by Zwecker & Durand. 8vo., cloth, \$5 00. Harper Bros., New York.

Young Folks' History of the United States. By Thomas Wentworth Higginson. Illustrated. Pp. 370, price \$1.50. Lee & Shepard, Boston. 1875.

The Period of the Reformation, 1517 to 1648. By Ludwig Häusser. Edited by Wilhelm Oncken, Professor of History at the University of Giessen. Translated by Mrs. G. Sturge. 16mo., cloth, pp. 701. Robert Carter & Co., New York.

The Iron Age of Germany. Translated from the German of Franz Hoffman, by Rebecca H. Schively. With an historical sketch by C. P. Krauth, D. D. Lutheran Board of Publication, Philadelphia.

Bulletin de L'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique, 43^e année, 2^e série, tome 38, No. 11. Bruxelles: F. Hayes, Imprimeur de L'Académie Royale. 1874.

Annuaire de L'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique. 1875. Quarante et unième année. Bruxelles: F. Hayes, Imprimeur de L'Académie Royale. 1875.

Guy Mannering. Peterson's cheap edition of "The Waverly Novels." Price 25 cents. T. B. Peterson, 306 Chestnut street, Philadelphia.

A National Constitution: The only Road to National Peace. A letter to the President of the United States. By Wm. Giles Dix. 1875. Estes & Lauriat, Boston.

THE
PENN MONTHLY.

APRIL, 1875.

THE MONTH.

THE House of Commons has acted on the election of John Mitchel with a promptness which at Washington would take away the American Congressman's breath. Hardly had the choice of Tipperary county been made known, before the proper member of the Disraeli cabinet made a motion declaring Mr. Mitchel ineligible and his election void, and the House passed it at once without a division, and almost without debate. The advocates of Home Rule in Ireland could hardly have had a more severe blow given to their theory that the Irish are fit to rule themselves, than the conduct of that people in forcing the election of Mr. Mitchel. Distinguished in Europe only as an agitator, made martyr by a criminal prosecution by the English government some years ago, he is chiefly notorious in this country for the noisy manner in which he advocated the secession view early in the rebellion. Exactly upon what theory this martyr to liberty grounded his devotion to negro slavery and the hostility towards democratic institutions as supported by the North, of which he still makes boast, we have never been informed, but he belongs to a class of reformers who generally refuse to give reasons, after the manner of Jack Falstaff. He now announces his intention never to make peace with Great Britain, and thereupon asks an election to her Parliament; the intelligent voter enthusiastically support-

ing him perhaps for the logical reason that he cannot consistently take the necessary oath of office if elected and allowed to claim his seat. Meantime Mr. Mitchel, nothing daunted by the action of the Commons, has taken the field again, a candidate for a second refusal. He is, moreover, provided in case of his own giving out with a substitute worthy of him, in the person of his son, whom, like Hamilcar of old, he has made to take most fearful vows against the Saxon—so well represented in the present case by Mr Disraeli—and who burns to tread in his father's agitating shoes. The prospects for lively times in Tipperary are as brilliant as the most sanguine could desire. A moment after the doors of St. Stephen's were shut in Mr. Mitchel's face, they swung ajar, if not wide open, to admit another Reformer. He came in quite alone and unattended. The custom of centuries, perhaps, certainly of many years, has been that a new member shall be introduced by two sitting members, and it is a custom which till now was never departed from. But Dr. Kenealy has fallen from a high estate, and while he could find voters enough in Stoke-upon-Trent to send him to the door of the House, none of the members seemed at first ready to conduct him through the vestibule. But this fact having been commented on, Mr. Bright, always independent and liberal, and Mr. Whalley nothing, if not eccentric, offered to perform the duty. At Mr. Disraeli's instance, however, the ceremony was dispensed with. The election of the disbarred doctor was a natural enough result of the agitation about him of the past year. There are always to be found many men, especially in England, who, as the Yankee said, "take, in a dog-fight, the part of the under dog:" add to these the turbulent and dissatisfied, who will vote for almost any one to make a row, and those whose feelings the Tichborne champion could arouse by his sufferings in behalf of a man whom thousands look upon as the victim of the power and influence of caste—and you have a phalanx hard to beat in a town like Stoke-upon-Trent. The doctor goes into the House, in the language of a Western orator, "to smash things." As he modestly says, he proposes to make the timid members tremble, as he did the unjust judges in the Tichborne case. One plank of his platform is announced to be the exclusion of lawyers from Parliament—adopted doubtless since his summer-sault over the bar. The remainder are as radical. If he have a

fair field—he can expect no favor—he will make the floor of the House almost as lively as Tipperary.

IN France a new ministry is to be formed by M. Buffet, long the President of the Assembly. Meantime the late ministers are discharging their duties as an *ad interim* ministry. The curious nature of the government under which France is existing was shown the other day by the action of General De Cisse, who mounted the tribune and informed the Assembly that he was instructed by the Marshal-President, to say that the proposed course of the majority with regard to a certain bill was not what he desired; and the Assembly took the hint accordingly. The Senate as constituted by the bill adopted will consist of seventy-five men, chosen by the Assembly, who are to hold office for life; and two hundred and twenty-five by the Departments, who are to sit for nine years, a third to retire every three. It is modeled to a certain extent on the American upper House, but it will form a very different body. But all the strainings and reachings of the French mind toward a stable form of Government, have thus far been in vain. Every one feels that the Septennat is but a bridge of doubtful strength—its farthest buttress resting on what none can tell. But it spans a raging torrent and so men trudge over it toward the uncertainties to which it leads, content perhaps if it bear them for the time.

THE return of Garibaldi to Rome is a notable event. He came in quiet state, borne in on the popular heart through the gates out of which he charged so hopelessly that night in '49. His mind seems to be full, not of politics this time, but of a scheme to drain the marshes of the Tiber and make the Campagna a fertile plain. The skill and ingenuity of engineers has been spent for centuries in devising a good plan to accomplish this result. One after another has been suggested and put aside. This was too expensive, that too elaborate—this one difficult, the other impossible. Suddenly from Caprera comes this strange old man, as full of enthusiasm in this new cause as when he landed on the Sicilian coast, now sixteen years ago, to make united Italy. His plan has been examined and approved by a board of engineers. It is

deemed possible, and with the means that can be raised. The King, the Parliament and the Municipality are one in its favor, and there is prospect that it will be soon begun. Should it be successfully carried out, what a last work will it not have been for Garibaldi. The redeemed Campagna will be a far more magnificent monument to him than all the memories of Mentone and Aspromonte.

LORD DERBY has agreed with the Spanish government upon an indemnity for the Virginius prisoners slaughtered by the Cubans, and an attempt is now being made by our Government to effect the same thing. It can hardly be expected, however, that Mr. Fish will agree to the list of prices which the Englishman has accepted. Colored men are rated by the latter at several hundred dollars less in value than white ones; a discrimination which is not singular perhaps in England, but would never be suffered here in these days of civil rights bills. Nothing but absolute confidence in the Administration, no doubt relieved General Butler from the necessity of risking his life and using up his tissues in defence of a section forbidding the Secretary to discriminate in favor of his own color, as the English aristocrat has so wickedly done.

AT noon on the 4th of March the last session of the Forty-third Congress came to an end. Its closing hours were marked by some significant events and the passage of more than one curious measure. After an all night contest, the civil rights bill was passed and sent to the Senate. There it met with vigorous and able opposition. Senator Carpenter, in one of those moments of wisdom which have several times in his career given promise—too often fallacious—of real statesmanship, made a most powerful speech against it. Coming from him it was especially effective. His chief objection to the measure was on constitutional grounds. He declared it to be his belief, and in closing, his earnest hope, that the courts would pronounce the bill unconstitutional, and elaborating the view suggested by Mr. Phelps in the House, of the danger of attempting to legislate against prejudice by the passage of bills of doubtful constitutionality, he declared that the colored man of all should be most jealous of the constitution. That instrument, he well said, was the protection

of us all, and the weaker among us should especially resist any encroachments upon it of whatever kind. The arguments against the bill were not answered, but the bill itself passed, and has received the President's signature. The section providing for mixed schools was stricken out. This law is in itself a singular example of the impossibility of effecting certain things by legislation. Undoubtedly there should be no unjust discrimination upon the ground of color, and society is defective so long as it makes any. But it is quite impossible for a people brought up, as the southern people has been, to regard the negro as in all things the inferior of the whites, to drop the prejudices and opinions of a lifetime under the threat of an act of Congress. The negro, with whom the southern white is most familiar, is as a rule ignorant and uneducated; you cannot make him different in a day, nor ever simply by legislation. The class distinctions on account of color should be doomed to die that natural death that is inevitable. Like certain plants, such prejudices grow in the damp soil and dark places. Let in the light, drain the ground, and they die out insensibly. Education and time are the two gardeners we need for our southern plantations, and tools for the former are what Congress should busy itself to give. In Europe negro men and women go to hotels and theatres, and travel in the cars without remark; even in India, the home of Caste, there is no such prejudice as we have against the colored man, but in none of those countries have there been attempts to legislate in matters of the kind. Left to itself, prejudice will die out; fostered, it will linger long and do no end of harm.

THE Louisiana business is settled, let us hope, finally, if not with satisfaction to either side. The differences of the Committee of the House reflect the varied opinions of the country; and the final decision to which the majority and the House came will doubtless be received by the mass of the country as the best thing, on the whole, that could be done with a bad business. Justice demanded the seating of the five expelled members, and a wise concession was, perhaps, made in agreeing that Kellogg should not be disturbed, in view of the fact that the United States troops would doubtless hold him in his rickety chair till the end of his term. Like all compromises, however, where there is a concession to

anything evil, this action brings with it a penalty, and has led the House into an injustice to McEney, of which it made a signal confession before it adjourned. The Conservatives who contested the seats of Pinchback and Sypher were on the same ticket with McEney. Sheridan, Pinchback's opponent, being a candidate at large, was voted for in the whole State, and was certainly defeated if Kellogg was elected Governor. Yet the House deliberately admitted him a few hours after it had voted to recognize Kellogg, and within fifteen of its adjournment *sine die*. Sypher, too, was cruelly ousted after serving through both sessions, and a Conservative took his place for half a day. The almost despairing hope of securing peace and quiet for the remainder of Kellogg's term, has at last brought his opponents to the point of recognizing him as *de facto* Governor. If it put a temporary quietus on the strife and turmoil which have distracted New Orleans so long, the price will no doubt have been well paid.

It is doubtful whether the Democratic party in the fatal Kansas struggle ever did a more mad thing, than the passage by the Republicans of the House of what is known as the Caucus Force bill. Of questionable constitutionality and of a partizan character, the dangerous tendency of which admits no doubt, calculated to agitate rather than compose, to disturb rather than to calm; a party measure which has aroused against it every man in the party who has shown that he has ability and at the same time a conscience, the Force bill was pushed through the House of Representatives by General Butler as a fitting climax to his congressional career. And after all, what has its passage accomplished? Sent to the Senate too late to pass that body before its adjournment, it dies on the calendar, bequeathing the heavy load of its short existence to the tottering Republican Party. It has done nothing but arouse the spirit of the Southern men, encourage the disaffected, unite the scattered opposition, and worst feature of all, like the "heroic" policy of the Administration in Louisiana and the statesmanship of the President in the Arkansas message, it forces the opponents of the Republican party into the safe and strong position of defenders of the Constitution. His rapidly approaching political death seems to have made Butler even unusually reckless, but at this writing that dissolution has

taken place and nothing but the memory of him and his works remains. The vote on the final passage of the Force bill shows the most remarkable separation of the sheep from the goats that has been seen at any time yet in the memory of Republicans. Burrows, Dawes, Garfield, Poland, Phelps, Hawley, the Hoars, the Willards, Foster and nearly every name with which the people have grown at all familiar as among the leading Republicans in Congress, voted with the Democrats. The *New York Nation* alludes to the significant fact that 96 of the 134 who voted in the affirmative go out of office, and the *Tribune* has assured us that at least three have already their reward. The sensation which Mr. Maynard, Mr. Orth, and a Mr. Donnan will make in Constantinople, Vienna and Brussels, respectively, it is not hard to imagine. The first two are shrewd, active politicians, who have been men of usefulness in the business of legislation; the last is unknown to fame but comes from Iowa, latterly a State exceedingly productive of statesmen. It would be hard to select men less fitted by nature or experience for a foreign mission, and their translation to diplomatic life seems a travesty and almost a burlesque; but unfortunately it has its tragic side. We had almost written, the force of bad appointing "can no farther go," but we remember Murphy, and Bliss, and Richardson, and Shepherd, and Packard, and Casey, and Schenck, and Cramer, and Williams, and Cushing. It has perhaps gone farther and may again. General Butler might, within the limits of possibility, be nominated as Minister to England. Let us rejoice that these appointments are no worse. But that after all is poor consolation as we complete the first century of national life.

JUDGE POLAND, of Vermont, has gone out of political life in a blaze of glory. Seizing the floor two nights before the adjournment, he held it successfully, and after a speech, which is highly spoken of by all sides, secured the passage of his resolution in the matter of the contest in Arkansas. The extraordinary message of the President has thus had a direct answer from the House. But even in this the House was inconsistent. In the Force bill it deliberately included Arkansas in the list of those unhappy States in which Gen. Grant might suspend the writ of *Habeas Corpus* in the extraordinary event of two or three gathering together

to do wrong: Then in the same breath it declares it to be at peace and enjoying a legal, stable and Republican form of government. But this last enactment, fortunately, is of more weight than the other, which failed to become law. The Senate has taken no action on the message, which amounts to a declination to interfere, so the President's theories as to the power of the people to make State Constitutions and of Congress and himself to overthrow them, are not yet ingrafted upon our political science, elastic as so many of its principles now seem to be. But then, after all, the President, like "General Sheridan, is not a Constitutional lawyer."

THE municipal election in Philadelphia caused no excitement. The vote is interesting, for several reasons. The Republicans elected sixteen magistrates, the Democrats eight. Seven of the latter owe their selection out of the whole Democratic list, to the endorsement of the Reform Club. The latter's ticket received from 10,000 up to 18,000 votes, in a poll of 86,000, an extraordinary gain, as the *Public Ledger* has well shown. The difference between the lowest successful and the highest unsuccessful candidate was less than 2,500 votes and (significant fact) the stay-at-home men numbered this time about 30,000. The election was one of those after which all sides are smiling. The Reformers are satisfied with their vote, which exceeded the expectations of most of them. The triumph of the Union League in changing the tweedledum of Messrs. Urian and Guyger for the tweedledee of Messrs. Thorp and Pole, is unmarred by any feelings of affectionate regret for the former's future welfare, it being announced that Mr. Urian's services (in company with those of Mr. Joseph Ash, who was not elected Coroner last fall), are not lost to his country and his kind, through the patriotic foresight of Mr. John L. Hill, whom conspicuous merit has just elevated to the head of the Highway Department. Nor is there any undue regret that Col. Glenn, the only candidate for councils whom the League denounced, was re-elected by a largely increased majority—for that gentleman's "Republicanism," as we are told, has been proved in the tented field, and cannot, for a moment, be impeached. And finally the Democratic leaders are satisfied at having done what they could not help doing at any rate, elected one-third of

the new magistrates, the best men among them sincerely rejoicing that the persons chosen were the least objectionable of all their very objectionable list. Thus all hands are happy, and quiet reigns upon the Delaware. It is said that a disturber of this public peace is about to appear in the shape of a two-cent daily, called *The Times*, edited by Colonel McClure. In the words of a cotemporary, it is expected that "the Colonel will enliven things." It may be hoped so. He has all the ability necessary, and much might be done just now in that direction, without causing many of us to imitate the legislator at Harrisburg, who fainted the other day, we are told, "from excitement and the constant mental strain consequent upon trying to follow the business of the House and get an idea of what was going on."

THE ELECTION OF POLICE-MAGISTRATES.

AS the late election was the first one since the adoption of the New Constitution in which the much-denounced principle of minority representation was tried, a word on that subject may not be amiss. The advocates of this theory considered the strongest argument in its favor to be the power of selection given to a party from its own regular candidates. The reader must not confound with minority representation, properly so called, the ephemeral expedient introduced by the Constitution of choosing judges, where only two are nominated. That shift was resorted to, because the then political minority in the Constitutional Convention was of opinion that *political* representation on the Bench was desirable, and in that view the majority concurred. But in the Court of Common Pleas the power of the minority to choose its judge was restricted to the single instance in which it has already been exercised, and in the Supreme Court it can only be exercised where two judges are elected in the same year, a thing that is not likely to occur more than once or twice in a century, if so often. The Constitutional Commission has recently reported in favor of amending the Constitution so as to rid it of this clause, in their opinion so obnoxious to the theory of Republican institutions. If less language were wasted on the logical form of our government, more effort would perhaps be made to improve

its essentially bad features, whether consonant or opposed to "theory." It is not in accordance with the theory of crab-apple trees, that they should bear other fruit than crabs, but grafting solves the difficulty by introducing a radical change. A wise man may cast his eyes beyond his own generation, and regard the advantage to an American State to be derived from a Supreme Court brought up in different political schools as far counterbalancing the infringement of the theory that the majority should monopolize the judicial seats. The question is to a Pennsylvanian of but little moment, as there is no probability that the alterations recommended by the Commission will be adopted.

To return to the recent election, the sub-judiciary of Philadelphia had fallen into deserved disrepute, and if we can fancy Brabantio risen to judicial instead of senatorial dignity, Iago's thrust would not seem so cruel.

Bra. Thou art a villain!

Iago. You are —— an Alderman.

It was thought by the Convention necessary to make a wholesale reform. This was done by (1) withdrawing from the minor judiciary all political powers; (2) by reducing the number of magistrates from about a hundred to twenty-four; (3) by introducing the principle of minority representation, and necessarily that of choice inside the party among the nominees.

The latter object was attained by providing that no one should vote for more than two-thirds of the whole number to be elected. Both parties pledged themselves in advance to use their utmost efforts to secure good candidates, and threatened to act decisively if bad men were set up. A feeble effort had been made to frame the act under which the magistrates have been chosen so as to limit the choice to lawyers, which was readily defeated. This result was fortunate, for *ex pede Herculem*, and judging by the only lawyer nominated by the Democratic party, the ex-magistrates might with justice have complained that the aldermanic tone was being lowered by admitting barristers to contest in the arena just quitted by them and famed for their ancient feats of force and guile. Sixteen were nominated by each party convention. The Union League, which had pledged itself to secure good men, girded up its loins and struck off two men from the list of candidates, to the inexpressible joy of several equally unworthy candidates, who doubted but that the unsought for choice

of the League might lift them from enviable oblivion to well-earned disgrace. The managers of the Republican party would have gained more character for sincerity if this convention had not immediately filled the places of the two candidates marked by the Union League with two others, branded by the Reform Association as equally objectionable with those whose places they had gotten. The Democratic convention served its party equally ill, and the feeling which had raised the slight revolt in the League, manifested itself in the Central Association of Pennsylvania Democrats, the principal Democratic club of this State. A meeting of the members of the Association was held on the 29th of January, and after a long debate, a resolution was passed for the appointment of a committee of seven, who were empowered to represent the club in any measures, regarding the nominations, they might deem advisable. This committee struck off five of the regular nominees, and suggested names in their places, which action was confirmed at a subsequent meeting of the Association. This was a week before the election, and but little could be done to affect the party organization. The result was, however, completely satisfactory, for the five persons objected to by the Association were defeated, running from three to twelve thousand behind the rest of their ticket, and though one of them, Alderman George Moore, had the support of the Reform Association, and of that clique in the Democratic party of which Alderman William McMullen is the leader. The whole Republican ticket of sixteen was elected, the public indifference or incredulity in the honesty of the managers being shown by the fact that the regular Republican vote fell from its usual fifty-eight thousand to forty-two and forty-three thousand, and the Democratic vote from forty-eight thousand to thirty-six thousand. There were four Democratic tickets in the field:—(1) The regular ticket of sixteen; (2) the ticket recommended by the Association, containing eleven of those on the regular ticket and four additional ones; (3) the two Reform Association tickets, consisting, one of four Democrats (those named by the Democratic Association,) and twelve Republicans, and the other of twelve Democrats (eight of the regular nominees having been added to the four named by the Democratic Association,) and four Republicans.

The vote cast by the straight Democratic element may be

reckoned at twenty-eight thousand six hundred and sixty-five, the vote of Thomas Maher, Jr., who was on that ticket only. The vote of F. S. Cantrell, seventeen thousand four hundred and fifty-nine, who was on both of the Democratic-reform tickets and that of the Democratic-Association, may be taken as the combined force of the latter powers, the liberals. The relative force of these two Associations is harder to estimate. If, however, we take the average vote of the four Republicans who were on both reform tickets, (11,000) and not on any other, we shall have the Reform vote, and this subtracted from Cantrell's vote (17,000) would give six thousand as the strength of the Democratic Association ticket. This calculation, however, cannot be completely relied on, since Leisenring's vote (34,502) exceeded Moore's (31,361) by over three thousand. The excess of these votes over the straight Democratic ticket ($34,502 - 28,665 = 5,837$; $31,361 - 28,665 = 2,696$) represents the relation between the ticket of the Democratic Association and of the Reform-Democratic ticket, Leisenring being on the former and Moore on the latter, and both being heavily scratched. If, then, the Reform-Republican ticket got a thousand more votes than the Reform-Democratic ticket, *i. e.*, in the ratio of 4 to 3, the whole Reform ticket would amount to ($2,696 + 3,696 =$) 6,392. Dividing the seventeen thousand votes belonging to the combined force of the Reform and Association ticket in this ratio (6,392 : 5,837), we shall have about 9,000 as the strength of the two Reform tickets, and 8,000 as that of the Democratic Association ticket.

We can only say in conclusion, that a force which, at a week's notice, and without money or discipline, can poll eight thousand votes for candidates excluded from the regular organization, is one which if wisely handled may eventually purify the Democratic party in this city. It is encouraging to see that both parties feel that they must at least pretend to reform if they wish to succeed; for though Rheinecke Fuchs, while confessing his sins with penitential tears, was stretching forth a paw to throttle an unwary hen behind him, yet, if we watch the backslider and compel him to adopt for his motto, *nulla vestigia retrorsum*, we may in time train the politician to be a useful public servant, instead of an irresponsible plunderer.

NATIONAL EDUCATION.—III.

THAT every nation is an industrial whole, characterized by a certain national average of industrial power and economical organization, and is to be treated as such in its national economic legislation, is a part of the doctrine of nationalities that is but very gradually finding its way to general acceptance. It underlay, indeed, the theories of the much abused and caricatured "Mercantile School" of Political Economists, but it can hardly be said to have attained clear statement in their teachings. They came to an end with the rise of the cosmopolitical schools of the *Physiocrates* and of Adam Smith, whose teachings were the reflex of the tendencies that prevailed last century. It was a century of shallow reactions, and not the least remarkable was the reaction against the nationalist sentiment, which arose in the later Middle Ages, culminated in the Protestant Reformation, and shaped for centuries not only the politics but the religion and the very thoughts of Europeans. The great men of last century shared in the reaction as well as the small. Goldsmith, Frederick the Great, Lessing, Kant, Goethe, Schiller, Hegel, repudiated the sentiment of patriotism as one unworthy of a civilized man. Even Fichte, not long before the disastrous battle of Jena, which gave his country into the hands of Napoleon, declared that "only a mere earth-born man would mourn over the fall of his country," and that "a man of true culture would ever regard the country whose culture was the highest as the real fatherland and home of his spirit." The French Revolution was but the flower and ripe seed of this cosmopolitan sentiment. Its declaration of the "liberty, equality and fraternity" of mankind, the fierce energy with which it trampled down the national boundaries that had sundered people from people, the dull acquiescence with which men submitted to the rule of its crowned soldier, the new Augustus of Europe—were all the consequences of a great decay of the old feeling that made the member of every nation proud and fond of his own country.

Out of the humiliation of the nations was born again the sentiment of nationality, which has never ceased to mould the politics of Europe since that day. It has united Germany, it has liberated Italy and Greece, it has plunged Poland, Bohemia and Ire-

land into unceasing conflict with their masters, it has sundered Belgium from Holland, it has raised Norway and Hungary to virtual independence of their associate kingdoms. Nor is its work yet done; until the bodies politic, endowed by a divine Providence with the "will to be one," which is the root of all nationality, are recognized as autonomous portions of the State system of Europe, this great impulse will never cease to shake the foundations of the artificial system which as yet holds its own.

The rise of the sentiment of nationality began in England and in Germany. It was the life and spirit of the Philippias, with which Edmund Burke filled the ear of Europe as he denounced the Cosmopolitan Revolution. It was the lesson that the listening multitudes heard from the pulpit of Schleiermacher in Berlin, in the days of humiliation, when no military threats and cautions could quench the fire of the pale, slight, Teutonic prophet of the nation's deliverance. It was the burden of Fichte's grand *Discourses to the German Nation*, whose delivery was often interrupted by the beat of French drums on the street. It was the strength of Stein and of Niebuhr, and a host of others, who waited and suffered and hoped through the dark days of French domination. It was the living impulse that roused the people of Spain and Germany alike against the invader, that glorified Badajos and Coruña, Leipzig and Waterloo.

But the school of political economy, which has held its own as the orthodox body of teaching in Europe, and to a less extent in our own country, was born in the period of cosmopolitical reaction, and shared in its principles. While in every other branch of politics and of literature cosmopolitanism has given way to the principle of nationality, while the very term has become a by-word and a jeer, in the sphere of economic science it has held its own. There are two prominent reasons for this. First. The relation of the industrial state to the national life in general has been very imperfectly appreciated. The jural state and the culture state are the sides of national existence that cannot escape notice. Their interests are topics with which every educated man, by the very fact of his education, has more or less familiarity. But the very conception of the nation as an industrial state is a modern one. It comes to day in the policy of Frederick and Napoleon for the first time. No other great rulers have had

so well defined a conception of the subject. In literature it was first given shape and utterance by the German opponents of Adam Smith, especially by Fichte in his *Geschlossene Handelstaat* (*The Industrial State closed to Commerce*), published in 1809, a study of the subject from the political side. Franz Baader and Ad. Müller, followed or anticipated him in this position, and in France the same conception was elaborated by Saint Simon, the great socialist. But in his view the industrial state was not a co-ordinate part of the modern state, but its true and real form to the superseding of all others. He would re-organize the government by entrusting all political power to the ablest men in each of the professions; he would abolish all hereditary rights; and vest in this aristocracy of industrial capacity the redistribution of all estates to those persons who could make the best use of them, whether or not related to the previous possessor. In this subordination of the other elements of the State, St. Simon had been followed and copied by all the modern socialist schools. They would all make the industrial state everything, reducing the jural and intellectual life of the nation to mere subordinate departments. They all pronounce the problem of the organization of industry to be the one problem of modern statesmanship. They regard it as the function of the State to interfere directly with the industrial life of its people—to not only promote, but provide for the general welfare.

Secondly. In antithesis to this school, stand the Political Economists of the Cosmopolitan or Passivity school. They regard the industrial state as in no sense a constitutive part of the national life; they hold that government has no sort of responsibility in regard to it, save "to let it alone." When challenged to account for the misery of "the most numerous class, that is, the poorest," (Saint Simon) in most countries of Europe, they claim that it is not the result of bad policy, or no policy, on the part of the ruling classes, but of the operation of natural economic laws, which are either beyond all human control, or are capable only of direction by the mass of the poorest and most ignorant classes. In substantiation of this thesis, they present us the body of teaching on the subject of population and food, land and rent, labor and wages, money and commerce, which make up the staple of treatises on Political Economy, and have earned it the name of "the dismal science."

It might seem to the unwary, and indeed it is often claimed, that this passivity theory furnishes the most effective weapons to contend with socialism and communism. "Here," it is said, "we take our stand. *Obsta principiis* is our motto. We cannot admit that the State has anything to do with industry but to 'let it alone.' That simple formula is an all-sufficient rallying cry and slogan in the conflict with socialism and communism. While we hold to it, we can consistently resist all attempts to carry the activity of the State into the sphere of industry, to set up national workshops, to assail vested rights, and to redistribute property." Had the school abstained from trying to account for the misery—the great mass of misery—inside Christendom; had it elaborated no theories to excuse the ruling classes and to show that there is "nobody to blame" for it; had it not striven with all its powers to show that that misery is bound up with the existing frame-work of society, and arises from its laws—had they not done all this in order to vindicate the purely passive policy as the right one—their position would have been to-day much more tenable against the socialists. But it is too late! For three-quarters of a century they have been forging weapons for the hands of the socialists and communists of Europe and America. It is they who have given to demagogues and agitators the arguments with which they address themselves to the working classes, and urge a reconstruction of society, as the only means of redressing the inequalities of human condition. Bastiat found French socialists pleading the accepted economic "theory of rent" as a reason for the abolition of all land tenures, and sought for a refutation of it as a means to refute the French socialists of his day, and found it in the writings of a leader of the nationalist school. Lassalle, the greatest of the German socialists, presented himself before the German workingmen as "armed with all the knowledge of his age on this subject," because he had mastered the teachings of the English economists, and knew how to prove from them that the workingmen could only prosper by the destruction of modern society. His great and successful opponent, Schultze-Delitzsch, met his arguments by others drawn from the same armory as Bastiat had visited, the writings of our townsman, Henry C. Carey, the greatest of the nationalist school. That the French and German socialists had not dealt unfairly with the English school,

may be seen from the works of its greatest modern representative. Mr. John Stuart Mill shows us that a study of the world's social order and of the prospects of the race, had led him to substantially the same conclusion, viz: That unless the existing social system prove itself capable of results that it gives no promise of, it is doomed to destruction at no very distant date; and that the new order constructed out of its elements will be fashioned somewhat after the likeness of the Utopia of the St. Simonians. He is an illustration of the tendency that inheres in the human mind, and in society, to swing clear across from one extreme of error to another, without reaching the golden mean of truth that lies between them. That tendency is one that makes all errors and extremes exceedingly dangerous, because every extreme provokes an equal reaction. Men sometimes speak of "erring on the safe side," and some notion of this sort seems to be in the minds of those who regard the passivity theory of the State's duty to industry as the best defence against communism,—who would deny the industrial state its true place and importance, in order to withstand the more effectually those who would make it everything. But there is no "safe side" in error—no safe extreme.

He that roars for liberty
Faster binds the tyrant's power;
And the tyrant's cruel glee
Forces on the freer ho ur—*Tennyson.*

The society, of whatever class, that has not attained the stable equilibrium of truth, must vibrate between opposite extremes until it does.

And therefore the most effective refutation of an error is not the statement most opposed to it, which is generally equally an error. It is the statement that lies not too far from the error to embrace the fragment of truth that gives vitality to the error itself. And, therefore, the most effective opposition to socialism and communism is offered by the nationalist school of economists, who regard the industrial state as one of the three co-ordinate elements of the national existence, and accept the principle that the State is responsible for its well-being and its progress. The essential principle of that school has been remarkably anticipated in the preamble of the Constitution of the United States, where, among the objects to be secured by that instrument are specified

“ to provide for the common defence and promote the general welfare.” The Socialist would have written “ provide for the common defence and the general welfare,” making both the jural and the industrial state departments of direct governmental activity ; possibly he would have reversed the order of the two things to be provided for ; possibly he would have omitted the former entirely. The Passivist would have omitted the latter clause entirely, holding that the only sphere of governmental activity is the sphere of direct activity, the sphere of jural and purely political action. But the Nationalist accepts the formula just as it stands, as expressing justly and with due discrimination the true mode of national activity—direct *provision* in the one sphere, and indirect *promotion* in the other.

“ But,” the Socialist objects, “ why exclude the State from the direct control of industry ?” For many reasons, one of which is the “ letting well enough alone.” The existing constitution of society and of its proprietary rights, is very far from being the wretched, artificial, mischief-making thing that the English economist depicts it. It needs no lame apologies. Its “ constitution and course of nature” is governed by laws the most beneficent. A plastic law of progressive development is stamped upon it by its divine Creator, and its progress is constantly towards wealth and the equality of condition—the growth of man in power over the resources of nature and in free association with his fellows, for the ever greater mastery of those resources. And wherever the poverty of the savage state still perpetuates itself within the sphere of civilization,—wherever the growth of society in numbers has not been accompanied by an equal or greater growth in the power of association, in wealth and the equality of wealth, there are to be seen, not the irremediable effects of the natural laws of society, but the remediable results of a bad national economy. The selfish and short-sighted aggressiveness of some classes—at home or abroad—upon the welfare of others, has been able, through some evil legislation or defect of legislation, to frustrate the beneficent operation of the laws that govern social movement ; and what is needed to correct this is not to reconstruct society but to bring its methods into closer conformity with its own ideal of right and justice.

In thus setting aside the chief, the only argument for a socialistic

destruction and reconstruction, all that is needed for the refutation of these theorists is accomplished. There is no need to allege the uncertainties of the new system, or the immense value of the institutions to be destroyed. The sanctities of social and family life need not be dragged into the arena of controversy. Not only does the whole *onus probandi* in this matter lie on the shoulders of the socialists, but a fair presentation of the true economic laws of society, and of their real operation when not interfered with, is sufficient to convince most of this class of the needlessness of their reforms. They are not monsters, who would destroy for the sake of destroying; they are simply men stirred to impatience and indignation by prolonged misrule, or misled by long current theories as to the economic order of society. "Communism" says Boucher de Perthes, "is a subversive socialism opposed to a subversive society." It will find its only lasting practical refutation in the progress of the great mass of men in wealth and prosperity; its theoretical refutation in the vindication of the existing order of society as economically sufficient for the ends aimed at by the socialists themselves.

Such, then, is the place properly held by the industrial state in the national life. It is neither as the communist would make it, everything; nor, as the Passivist would regard it, a mere outside fact, related only accidentally to the national life. It is one of the three co-ordinate elements of the national existence, and as such, must be kept in view in any scheme of national education. It must be among the ends of that education to fit a man for his place in the industrial state.

We are here met at once by an objection, urged by some practical men and by not a few theorists, that the training for a place in the industrial state can only be acquired by actual experience in some industrial occupation. They urge that not scholars, but apprentices are receiving that training, and that the school cannot give it unless they are turned into industrial schools, and even then very imperfectly. We need be at no pains to deny the truth there is in such statements, and it is not worth while to smother such objections under a cloud of rhetoric. No doubt the actual contact with industrial fact in the workshop or the farm is the direct and indispensable training that meets the case. But in an indirect way the common schools can do very much to this end—

much more than they have yet attempted. As yet their instruction has rather turned the minds of the young away from productive industry than towards it. It has tended to make clerks and shopkeepers rather than good artisans or farmers. It has tended to exalt the position of the trader and his assistants in the minds of the young at the expense of the more useful, because productive classes. It has taught no practical branches, except commercial arithmetic, commercial geography, and the like. It has helped to create among us that curious public sentiment, which has been described by the phrase "the unpopularity of production." It has helped to accelerate the drift of the young from the farm to the counting-house, which it had far better have retarded. It has not cultivated any of that taste for the manufacturing arts which must be cherished among us, if our workshops are not to be forever filled with foreigners. In a word, it has shown how powerful an influence education may and must exert on the industrial life of the community, and the urgent necessity there is that it be exerted in the right direction.

To get a clearer view of the relation of the industrial state to the education of the people, we must consider it in its elements, which are three-fold. Some—the agricultural class, to wit—are engaged in superintending and directing the vital changes of matter which fit or help to fit it for man's use; others—the manufacturing class—in accomplishing chemical and other changes of form which help to the same end; a third—the commercial class—are busied in effecting those changes of place and divisions of quantity which bring the elaborated products of either industry within the reach of those who need them. The first class is the first and fundamental one, but depends for its prosperity upon the services of the others. All but the worst farming produces a surplus of farm products, and upon the existence of others than farmers, and their capacity to purchase from the farmers, depends the market for farm products. The three classes are in equilibrium when the other two are numerous and prosperous enough to consume the surplus of the first, and when the third class is just numerous enough to effect the exchanges between the other two. When this equilibrium is lost, it is the function of the State, as the co-ordinating power, to restore it by the indirect influence of appropriate financial legislation; for the State is put in trust with the people's wel-

fare, and in the absence of that equilibrium prosperity can never be permanent.

1. The technical education of the agricultural class is one of the most important of the national functions in this sphere. A scientific agriculture is about the last thing that any people acquires; and yet, in view of the relation of the life and happiness of the people to the fertility of the soil, one of the most important. The evil auguries for the future of the race that abound in the books of a certain class of economic writers, are all based on the relation of population to subsistence, and the best answer to them is based upon the consideration that the resources of the soil, when it has been subjected to such a course of tillage as modern science makes possible, are practically inexhaustible. Their limit has never been reached in the most densely peopled districts of the world. Rather with the growth of numbers and under a wise economy of human force, those limits will recede before the advance of mankind, and the soil that fed a few scantily and grudgingly, will yield an abundance to a multitude whose labor is scientifically directed. But all this makes large demands upon the intelligence of the agricultural class; it calls for the most careful training of that class in all the general as well as in all the specific knowledge which bears upon their profession. It demands also the still more general training of the faculties, even by branches which lie outside of the farmer's own work, and which shall bring the profession as a whole up nearer to the level of liberally educated men—alive to the large material responsibilities that rest upon them as a class, and fully awake to the discovery of every possible means of discharging them.

Unhappily, by a most "unnatural selection," the agricultural class in our country is steadily drained of its most promising elements, by a sort of emigration to other industries. Its profession is carried on in a traditional plodding fashion, which gives no opening for youthful ambition, no scope for intellectual energy. The farmer's son sees no future before him in agriculture worthy of his striving—no ideal worthy of absorbing his life. If he be—or, what comes to much the same thing, if he fancy himself—a person of superior abilities, his thoughts turn naturally toward the city, the place of great fortunes and great reputations. And thus the very men who should be the life of their class, whose achieve-

ments might be the record of its advances, whose energy might carry it forward steadily to a higher level in the science and the art of the profession, are taken away from it. They fill our counting-houses and the ranks of our professional men. Some of them are among the ablest men in these other walks of life, while of others we are prompted to ask and wonder how they ever came to think that the most plodding agriculture was below their capacity. We have all met doctors and lawyers, or heard ministers, of whom the plow-stilt might well complain for their desertion of it.

The only effectual remedy is to be found in the elevation of agriculture to the rank of a scientific profession, through the gradual but thorough training of the agricultural class in the scientific principles which underlie the art. And that training must begin in the common schools of our country districts. It should form a large part of that "neighborhood knowledge," which was proposed in the first of these papers as a substitute for useless geographical information. The wonders connected with the lad's every-day life, the open secrets of the farm-yard, the field and the roadside—the geology of his neighborhood in relation to the kinds and qualities of its soils—its natural flora and fauna and their places in the zoölogy and botany of the world or of the State—the natural history of the domestic animals and plants—the meteorology of the district and its relation to agriculture—everything, in a word, that can be taught him and is of a sort to help him to feel that all around him lie things that are worthy of study and observation, should find a place in the course of instruction, at an earlier or a later stage. He would then begin to associate his home and its surroundings with the escape from a narrow and sordid horizon, which education offers him. He would find his life becoming more interesting and tolerable, and would look forward with pleasure to long years to be spent in contact with objects, each of which had become a gate that opened at his touch, and led him to wide fields of intellectual effort and pleasure. The country would become again the darling of her brightest children, when they could not only see the outer work-day garments that she wears, but get a glimpse into her motherly heart of wisdom and beneficent forethought.

For a very large proportion of such scholars, there should be a

completion of this course of study in a good agricultural college. These institutions have lately been the subject of very severe criticism on the part of President McCosh, of Princeton, who regards the outlay for their endowment, provided by Congress in 1862, as a grave mistake, and pleads the failure of similar institutions in Europe as an argument against further appropriations in their behalf. To those who approach the subject from the economic point of view, this reasoning has very little force. Agricultural education is simply a prime necessity of the industrial state, and the day is coming when untrained farmers will be regarded as much out of place in their profession as we are now learning to regard those untrained civil engineers, who have hitherto monopolized so much of that sort of work in America. And it would appear from the counter-statement of Dr. Gregory, Regent of the Illinois Industrial University, that Dr. McCosh is not entirely at home as to the history of agricultural education, even in Europe. The number of these institutions is much greater and their influence more extensive than he had supposed. So great an authority as Liebig told Dr. Gregory that "the success of agricultural schools in Germany has been immense," and that in Hesse in particular, "the value of land had been enhanced three hundred per cent. through the improved cultivation taught in the agricultural schools," and Dr. Gregory vouches for those of France, "that thousands of acres of land, worn out by the exhaustive tillage of a thousand years, and sometimes abandoned as worthless, have been recovered by the applications and cultures taught by the agricultural colleges of France." Nothing of this is inconsistent, however, with the facts which Dr. McCosh alleges, as having been seen by himself, and made the basis of his conclusions. He said that he could "testify from personal visitation that some of them are very feeble institutions." Had he visited our own well-endowed and well-managed Agricultural College ten years ago, he would probably have pronounced it a "very feeble institution." Owing partly to faults of management in its early history, but still more to the distrust of science, which is not yet extinct in the agricultural class, the roll of students made a very poor exhibit. The instruction both theoretical and practical was, we believe, all that could be desired, and the institution was thrown open to the children of every State in the Union; yet there was nothing like

the number of students that could have been accommodated, and the college was one of the most unpopular of our State institutions. We remember hearing a plan to turn it into a home for soldiers' orphans discussed in a Pittsburgh newspaper office in 1868. Thanks to the strenuous efforts of its last and its present President, and to the quiet Scotch-Irish persistence of the late Hon. Hugh Macalaster, of Bellefonte, the tide has turned in its favor and its future is most promising. But in this, as in all communities, the agricultural college has to make its position in the face of a passive but strenuous opposition. It has to make bricks without straw, nay—without clay. It has to prove by actual results that it can teach the students what will better fit them for their calling as farmers, before it can get any students to teach. It generally owes its very existence to men who are better and wiser friends of the agricultural class than its own members—to men who know what science can do to render farming effective. Were the question of its establishment to be submitted directly to the votes of the people for whose benefit it is intended, it would hardly escape, and if in the early stage of its existence some severe critic, like Dr. McCosh, were to visit it, he would undoubtedly go away with nose high up in the air, pronouncing it a "very feeble institution." But for all that, if our agricultural colleges are true to themselves and to the community, they have a grand future before them, and upon them depends the success or the failure of the fundamental industry of the nation, in meeting the vast demands which the growth of our population will yet make upon it.

The training given in an agricultural college, should not be purely technical. All experience shows the wisdom of combining disciplinary with technical studies;—of making the broader, human training *go pari passu* with that which fits the man for his special profession. There is no difference of opinion on this subject between scientific and other educators. Almost every member of the former class, with whom we are acquainted, is a zealous advocate of the disciplinary studies, and would like to have some acquaintance with Latin (if not Greek) made a prerequisite for admission to scientific schools, and also to have history, literature and the modern languages taught at least in the earlier years of the course. The report of the Faculty of the Sheffield school

of Yale College on the question of instruction in Latin, really reflects the views of the great body of those who are engaged in teaching the sciences. They are themselves, as a rule, men of liberal education and they prize too highly what they obtained in receiving that, to be willing to send out into the world a mere mass of specialists, who are ignoramuses as to every thing but their own pursuit, and who have no true claim to the name and place of educated men. Nay more they feel that in the absence of other than special training, they cannot make even good specialists of their students, and that some degree of liberal culture must at least precede, if it do not accompany, the curriculum of special studies. It is not from this class that the outcry against the classics has come, but largely from mere educational theorists, who were never brought practically face to face with the problem of the training of a single intellect. Of course they do feel, as every teacher on this continent is forced to feel, that one great obstacle stands in the way of this or any other wise plan of education. That obstacle Dr. McCosh has rendered us the service of stating most fully and forcibly. In no field is sufficient time given for a thorough education. Students enter our colleges too young, and graduate far too early. Years that should have been spent and branches that should have been acquired in the schools of preparation, the *gymnasia* of the land, are taken into the early part of the College curriculum. Young America must be making money as soon as he is come of age; he has not time for the training that should occupy the three or four years following that transition to responsibility and a vote. He has to follow a hasty and insufficient course of study in consequence, and our colleges and universities are in consequence a compound of the German gymnasium and the German university, but do not distinctly correspond to either.

The agricultural college then, should aim at giving its graduates a place among the liberally educated men of the community, as well as to make them scientific agriculturalists. It should do so, first, for the reason already hinted, that these liberal studies make them the more able to master the special studies of the course; and, secondly, that they may be able, when they have entered practical life, to take their proper place as the educators of the unscientific members of their own profession. True culture never

unfits a man for dealing with the uncultivated; in most cases it is the prerequisite for dealing wisely with them. The test of the truth or the falsehood of culture—of its reality or its superficiality—is in its giving or not giving its recipient a wider sympathy and a readier insight into the thoughts and prejudices of other men.

Of the special training of the agricultural college, we can only speak as one of the unlearned, who has had some opportunity of observing the discipline of one such institution. It is, of course, the harmonious synthesis of theory with practice. The lessons of the laboratory and the lecture room, are repeated on the experimental farm. The different methods of culture, the different sorts of seeds, plants, trees and live-stock, the different agricultural instruments are all brought under the pupil's own eye, and during certain hours of the day he is himself actively engaged in farm work. The results of all experiments are carefully recorded in farm-books, and the habit of keeping such records is enforced by both example and precept, as the only way in which the farmer can ascertain the real drift of his work, and make corrections whenever he finds any course unremunerative. The prior conditions of these experiments, such as the chemical quality of the soil, are carefully ascertained by scientific analysis, and the student is taught to move with his eyes open, where others must make experiments in the dark. The uncertain element of the farmer's life and its methods is as far as possible eliminated by application of scientific tests and principles, and the problem of increasing the fertility of the soil while taking from it a still greater yield of farm-produce, is brought to a practical solution by the utilization of the grand discoveries of agricultural chemistry.

But the agricultural college will come far short of its great end unless it can form a class within the community who are at once enthusiasts for the work they have to do, and fully awake to the difficulties they must encounter in doing it. They must meet prejudices, which they will either intensify or overcome, according to the wisdom or unwisdom of their action. They are called to become the educators of the whole farming class, to carry home to it the conviction that scientific knowledge is the key to its highest success and prosperity, and to gradually amend traditional methods or supplant them by better ones. By agricultural

societies, farmers' newspapers, State and county conventions, and all the other methods which bring that class into thorough contact with itself—if the expression may be allowed—this educated leaven must be mixed with the meal “till the whole is leavened.” It must win its way by patient persistence, by willingness to be taken for what it is worth, by steady waiting to have its own worth recognized. For such a course as this the discipline of the college must prepare its graduates, if it is to render the highest service to the community. It must, in short, strive to create in the minds of its alumni that scientific temperament, whose ideal Faraday described and exemplified.

(2) Of the education of one branch of the commercial class we have already spoken, in the first paper of this series. The purely mercantile profession, the vocation of the trader, possesses a fascination for the young men of our time and country, which partly disproves the too general impression as to the popularity of physical science, or at least proves it superficial. No profession admits of so little application of scientific principles, except it be the science of arithmetic and that of the money-market—of finance. Yet none is so thronged by the ambitious and clever young men of our time. Every place that offers an immediate return in salary for services as clerk, or the like, is sought by a swarm of applicants, while places that offer less immediate returns, with the chance of acquiring some productive profession, go a-begging. In truth, we love science not for work, but as an amusement; not as casting light on our daily work and helping us to better processes, but because of the startling sensation of its discoveries.

The only scientific profession connected with commerce, that of the engineer, the modern pontificate, is by no means overstocked with scientifically trained men, we are told. It is chiefly filled with amateurs, some few of whom, by thorough and patient work, have brought themselves up to the level of competency, while the majority are utterly unfit for the work they undertake, and only hold their own by underbidding competent men. The passion to have public works done cheaply is filling our country with badly surveyed roads, unsafe bridges, and leaky dams, which, in the next generation at farthest, will have to be replaced by better workmanship—perhaps after terrible accidents have told us with emphasis how dear cheapness often is. Such an accident,

the reader may remember, as having occurred in Arkansas not so very long ago, when a new bridge broke down under the weight of a crowd who had gathered to witness a baptism in the river beneath. The plan on which the bridge was constructed was a thoroughly vicious one, but it was a favorite with amateur engineers of the West, because it is one which they thoroughly understand, and can apply with mechanical ease in almost any set of circumstances. The Mississippi valley, it is said, is full of just such bridges, not one of them safer than the one that gave way in this instance, and all of them sure like it to prove unequal to any extraordinary strain upon their powers.

Here, then, monstrous as the fact is, we have, as in the case of our farmers, a scientific profession largely in the hands of unscientific men; and it is again a problem how the transfer to a more competent class shall be effected. But in this case there is the difference that we cannot afford to wait till the slow process of education has effected the change. Better have no public works than have such as are a positive injury to the community. At any rate, a strict governmental inspection, such as is provided for dangerous employments and explosive engines, should be exercised over every new undertaking of this sort, and local authorities should be debarred from the wasteful folly of preferring present cheapness to permanent excellence of workmanship.

THE RELATIVE MORALS OF CITY AND COUNTRY.

IT has been said that great cities are great sores, and every treatise on vice and immorality claims for the country as compared with the city, a superior moral influence. And this assertion has so long gone unchallenged that it seems to be received as an accepted fact which is not open to question or dispute. The object of this paper is one of inquiry; not of assertion. Without assuming to disturb the state of the public mind on this question, some discussion of it may attract further attention to it, and engage other minds in the consideration of it.

What are the superior moral influences of the country; and

what are the baleful influences of the city which exalt the one and depress the other in the scale of moral condition?

Do the established facts of the case exhibit a superior virtue in the country, and an undue prevalence of vice in the city as compared with it?

Unfortunately there are not sufficient statistics to furnish a satisfactory answer to these questions, and any general conclusions which can be formed will only leave them open to further investigation.

We all know the sweet influences of nature as seen in the open country upon a mind in harmony with the divine creation thus displayed, and "which looks from nature up to nature's God." But this pre-supposes already a condition of virtue. There may be a condition of mind which sees neither in the majestic mountain, nor in the extended plain, nor in the waving forests aught else than so much mineral resource; or so many acres of arable land; or so many cords of wood; like the man, who, when he first saw Niagara, had no other reflection to make than that it was a first-class water power. I do not think that it will be claimed for men who have been raised in the country, a keener appreciation of the beauties and wonders of nature, whether as exhibiting the goodness or wisdom of God, than for men who have been reared in the city.

Moral goodness does not depend for its sustenance upon either the physical, intellectual or esthetic qualities of our nature. It has its roots in other faculties of our being; in that deep inner consciousness of right and wrong, and in that sense of duty which we owe to God and man and every living creature about us. Christ hath taught us that it is "those things which come forth from the heart that defile the man; for out of the heart proceed evil thoughts, murders, adulteries, fornications, thefts, false witness, blasphemies; these are the things which defile a man."

We should look, then, for the sources of sin within us and not without us. Even where evil communications corrupt good manners, they do so because they are addressed to the evil that is within us, and not simply because they are exterior influences.

It is well in this connection to make some inquiry into the origin of sin, as tending to shed light on this investigation. And this can be best done by an analysis of the first sin, commonly

called the fall of man. Our catechisms teach us that God created man in an estate of holiness and happiness, and that by the first transgression he fell therefrom into an estate of sin and misery.

But why did he fall? Having been created in an estate of holiness, why did he not continue therein?

This question has perplexed the wise and good of all ages. The difficulty has been to reconcile the infinite wisdom, power and goodness of God, with the marred condition of man, the work of His hand, so soon after the creation of him—to reconcile these attributes of the Almighty with the existence of sin at all.

Some writers, to meet the difficulty, have supposed that man pre-existed, in an unremembered state, before his appearance on this earth, and that he brought with him into this world the conditions and tendencies which led to his downfall so soon after his appearance here. This is but removing the difficulty a step backward. We are as much perplexed, in a universe governed, by the same Ruler to account for his antecedent as for his present condition.

Others suppose the existence of a spirit of evil, which, next to Jehovah himself, has power over the thoughts and actions of men, and that these contending powers in turn control mankind as they bend the listening ear to the one or the other.

Without discussing the question of the existence of the evil one as an embodied or disembodied spirit, I think that we will find that the root of the evil lies much nearer to us, even in our own physical and spiritual structure and organization.

If God created man in a state of holiness, as the theologians teach us, He certainly did not confirm him in that estate so as to be beyond the possibility of a fall. The normal condition of Adam and Eve seems to have been simply a state of freedom from actual sin; not a condition in which they could not sin, for they did sin by eating the forbidden fruit. Why, then, did they sin?

Whatever may have been their moral condition before the fall, they seem to have been subject to like temptations as their degenerate descendants were after the fall. The Apostle James tells us that the temptations to sin are "the lust of the flesh, the lust of the eye, and the pride of life." All three of these elements entered into the temptation of Eve. For it is written, "And when the woman saw that the tree was good for food"—the lust of

the flesh—"and that it was pleasant to the eyes"—the lust of the eyes—"and a tree to be desired to make one wise;" or, as the tempter had just said, "Ye shall be as gods, knowing good and evil,"—the pride of life—"she took the fruit thereof and did eat, and gave also unto her husband with her, and he did eat."

This transaction certainly exhibits a strong family likeness between Eve and her countless sons and daughters, and shows that whilst yet in her sinless condition she was subject to like temptations.

I may remark in passing, that original sin had its origin in the country—and in the most favored part of the country—not in town.

What then is the origin of sin?

I think the answer will be found in the limited or finite nature of man. I think I have shown that it is not essentially consequent on the fall. Men may have an inherited or accelerated tendency to sin in consequence of the fall, but Adam and Eve sinned by reason of temptation before the fall; which shows that there is something inherent in man as he came from the hand of God, which leaves him subject to temptation.

On further examination it will be found that all sins have their foundation in natural desire. Sin has been defined to be any want of conformity unto, or transgression of the law of God. The word "transgression" has been well used to define the nature of sin. It is a transgression, a *going beyond* the proper use of some law or function of our being. For instance, the desire to have or possess is natural to us and proper; but if we desire to possess that which belongs to another, and take unlawful means to secure it, it becomes theft. Anger is a righteous feeling if it be directed against evil doing; but if we be angry without a cause, or in consequence of pride, or prejudice against our neighbor, it becomes malice, and may even end in murder. Love is the best gift of God to man, but unlawful love becomes vice of the most degrading character. All these are transgressions—that is, a passing beyond the lawful limit of a proper and natural desire or passion.

Even sins of omission have a like character. They have their source in a love of ease, or in a selfish disregard of our duties and obligations to God and our fellow-men. But selfishness is only a perversion of a law of our being. It is that law which leads us

to care for and protect ourselves, and without which the whole human family would soon perish from the face of the earth.

It seems manifest, therefore, that the possibility of sin is inherent in us, and is not exterior to us, and that it is a consequence of our limited or finite capacities. God cannot sin because He is perfect in all attributes. Man may sin because his faculties are limited, and subject to disarrangement by weakness, undue influence, and other disturbing causes.

These conditions are alike common to men, whether in the city or the country. And we have thus a common starting point from which to proceed in our inquiry.

It being thus manifest, as Christ has said, that "out of the heart proceed evil thoughts;" and as Bailey has said in his *Festus*,

"There is one great sinner, human nature,"

the next question is, Which of the two conditions, life in the city or life in the country, most tends to encourage or repress the possibility of evil which is within us?

It has come to be an accepted truth that "Idleness is the parent of vice," or, as stated in another form, "An idle mind is the devil's workshop."

An idle mind will seek something to occupy itself with, and it usually runs towards self-gratification. One of the old poets has said:

"See the issue of your sloth:
Of sloth comes pleasure, of pleasure comes riot,
Of riot comes disease, of disease comes spending,
Of spending comes want, of want comes theft,
And of theft comes hanging."

The remedy, therefore, for these evil tendencies, the fruit of idleness, is labor, employment.

An old farmer once said that he worked so hard that he had no time to sin.

If he had inquired a little farther, he would have found that he had but little tendency or temptation to sin. Those tendencies in him which lead to sin had been suppressed or absorbed by labor. So when man fell in the original transgression, God's means of recovery and preservation of him was labor: "In the sweat of thy face shalt thou eat bread, till thou return unto the ground."

This was not imposed as a curse on man, but a blessing. God said: "Cursed is the ground for thy sake." The ground was cursed, but not man. And for his sake it was cursed, that it might compel him to labor, which was to be to him a blessing and a protection from sin.

I do not think that in our schemes of redemption for fallen men, and in our modes of prison discipline, we have attached sufficient importance to the reformatory influence of labor. Men undergoing prison discipline should undergo day by day labor that they would feel to be toilsome, and that would convince them that if they must toil, it would be better to toil for themselves on the outside of a prison than for the State within the prison walls. Moreover, such continued labor would form in them a habit of labor which would make labor congenial and pleasant to them when away from the prison discipline.

Is then the busy city or the peaceful country more favorable to the conditions of a healthful morality?

There is an abundance of hard work in the country, no doubt, but there is not that constant strain upon mind and time which presses upon men of the city. The leisure of the country is more abundant, and this is particularly so of country towns.

If the city has its temptations so has the country; and the country frequently comes to the city to indulge its vices; so that the city has the credit not only of its own vices but, to some extent, of the vices of the country also.

A member of the bar collected for a client a ground rent which issued out of a property in this city, which was not a house of good reputation. When the amount of the rent was paid to him, he was not satisfied with the money, and desired other money. He was then handed a roll of bank-notes to make his own selection. There was scarcely a town within forty miles of Philadelphia having a bank, that was not represented in that roll of notes, which had been received at that establishment.

The Rev. Albert Barnes said, if a man wished to hide himself he should come to a great city. And so men come to a great city to indulge in vices that might subject them to detection and exposure if indulged in at home.

The *New York Times*, in a recent editorial, entitled "The Cost of a Mother of Criminals," said: "Country life, it should be

remembered, always preserves a criminal family much longer than city life. A city breaks up lines of criminals and vagrants. The incessant movement of a city population separates parents and children. There are more preserving and reforming agencies at work in a large town. The best quality of village life, the personal independence of working people, keeps a bad family from good influences. There is, too, in every county a nursery of crime and seminary of vagabondism—we mean the county poor-house, with its old ruffians and young children intermingled."

Besides the more direct and active agencies for the preservation and reform of morals in a city, in which respect I think it must be conceded it excels the country, the absorbing interests of business, amusement, and social life, keep the mind so occupied that there are but little space and inclination left to it to prey upon itself. The mind not only requires employment but amusement, and the city is the centre of amusement and entertainment in all their varieties.

And here, the too hasty moralist says, is one of the great dangers of city life. That there may be improper amusements and excessive amusement no one will deny. But these are not confined to the city. Dancing is quite as much an excess in the country as in the city, as one may know who has attended a country ball at a country tavern in the winter season, with its late hours, and hot supper, and excessive dancing, running sometimes into the early gray of the morning.

Gambling, too, is quite as much a vice of the country as the city; and the country tavern is frequently as much the centre of irregularities and excesses as like places in the city. With this further disadvantage to the country, that as the young and unemployed have no other place of public resort they meet there and soon learn all the vices which generate at such places.

The history of country towns is the history of thousands of the noblest and most promising youth of the country ruined at these centres of demoralization.

But then is not the theatre the peculiar institution of the city? and does it not bring in its train a flood of demoralizing influences?

When our puritan fathers prohibited the theatre, they had good reason to do so; for its teachings and utterances were indecent

and immoral. But even then, the stage was but the reflex of the usages and ordinary expressions of society. It is said that in the days of Queen Anne and the First and Second Georges, even the Court language was so indelicate that it will not bear repetition in these more refined times. We inherit much of our objection to the theatre from the traditions of the fathers. The utterances and actions of the theatre need not be more improper than those of the rostrum or the pulpit; and may be a source of both intellectual and moral improvement, as well as of amusement.

The love of amusement is natural to the human mind, and like all other natural tastes and appetites, is given to us by our Creator for some wise and benevolent purpose. Proper amusements tend to health of body and mind. The moral nature is benefited by amusement by preventing it becoming morbid and sickly on the one hand, and by arresting it from low and corrupting tendencies on the other.

It is said that before the theatre was established in San Francisco the town was given to the lowest revelry and debauchery; and that brawls and murders were of unceasing occurrence. The reason was, men had no other resorts for amusement than to the low dens of iniquity with which the town was flooded. When the theatre was established they were attracted to it were amused and entertained, and the morals of the town rapidly improved.

All approval of the theatre must be predicated of a well conducted theatre, where the decencies and proprieties of life are respected; and where at least a harmless if not an improving moral tone is blended with amusement.

It is not, perhaps, too much to say that in a great community like this we could better afford to spare one of our many churches than one of our few well conducted theatres. The ill consequences to society in the one case would probably be greater than in the other.

Man is held from evil by employment and amusement, as well as by moral teaching, and each must play its part, and supplement the other in the great work of rescuing man from the destructive tendencies of sin.

And observation, I think, will confirm that where men and women do not mingle amusement with labor, they either pervert

labor to selfish and excessive ends, or become morbid and one-sided in their general views.

In the consideration of this question, whatever has been said has been predicated upon an equal number of population, whether of city or country, and is intended to include, as a part of the country, the country towns.

WM. S. PEIRCE.

BIOGRAPHY.

IF History be Philosophy teaching by Example, then surely Biography is History taught by Examples. Mr. Hume has laid down the business of history not quite as briefly as was desirable, but as precisely as can be expected. "Most sciences," he says, "in proportion as they increase and improve, invent methods by which they facilitate their reasonings; and employing general theorems, are enabled to comprehend, in a few propositions, a great number of inferences and conclusions. History, also, being a collection of facts which are multiplying without end, is obliged to adopt such arts of abridgement, to retain the more material events, and to drop all the minute circumstances which are only interesting during the time, or to the persons engaged in the transactions." (Vol. I., Chapter 12.)

If this be an accurate rule for the guidance of historians, it is not easy to see what duties are left to be performed by biographers, nor what position is due to Biography, happily called the handmaid of History. It can hardly be an inferior one, because almost without exception, there is more favor shown it by the mass of readers; it can hardly be its equal, because not one of the many biographers whose labors delight and instruct us—not a Boswell, nor a Lockhart, not a Sparks nor a Marshall—not one of them pretends to claim for his productions the respect or reverence willingly granted to every book with History labeled on its back or prominent on its title-page. Even where there has not been spent a tithe of the labor, the diligence, the industry, the acumen, even when there is not an appreciable part of the skill in winnowing the chaff from the seed, in exhibiting the truth, in marking the uncertain, in detecting the false, all necessary ingredients in the

useful labors of a biographer, his reward is sure to be far less than that of any historian, no matter how much the latter may be wanting in the requisites of his craft, no matter how much or how successfully the other may have labored to master all the difficulties of his task.

American biography has just begun to lay claim, and fairly enough too, to that high rank which, in England and in France especially, this delightful branch of elegant literature has always possessed. Here, however, there is a strength and a firmness, a roundness and a fullness, an accuracy and a truthfulness which have been pre-eminently wanting abroad. A great part of the falseness of French memoirs, just as well as it is the principle cause of the intense virtue and proper behavior of nearly all the English lives, is due to the interference, of family interest, the continued presence of family patronage, or the fear of family anger, and the infliction of family resentment. The book which pretends to be a fair life of the great Marlborough is a good sample of job work. The life of the Marquis of Rockingham is equally untruthful, but the feelings of a descendant's love go much farther towards pardoning the imposition, than the avarice of a rich prebend. Fortunately, the sense of honesty is kept alive in the minds and in the pens of our family-biographers by the knowledge that the acts, and very often the writings, even the most private, of the person of whom they treat, no matter how illustrious or how obscure, are pretty sure to be known in some other quarter of our Union than that in which merely their family interests exist. The diversity of our political interests really seems to extend to interests that in themselves are personal, but which become general as soon as they are made historical. It is for this reason that biographies of our own heroes are very often very barren—for descendants, who dare not attempt to give to the record of their lives the coloring which, according to their notions, they ought to have had, are not very forward with those family biographies which usually abound so plentifully; much less do they readily give up family papers which would instantly overthrow their own heroic ideal men. Besides, there is great difficulty in coming down from our school-boy reverence for great men, as we are obliged to do when there is any attempt to be made at a sketch of their lives and their thoughts and their works. The shock of the descent from

an ideal great man, to that private, familiar, every-day appearance which marks his first approach to greatness, as we find it in the first part of our research, is not easily overcome in the gradual progression, which we trace slowly, and often very tediously, up to the high place or great fame that has first caught our attention and fixed our studious gaze; sometimes we are (so we think, at least) compelled in honesty to give up the life of a hero whom we have found to be only a common-place man; sometimes we feel tempted to overlook all his familiar appearance, and to turn towards the public only his bright and shiny side. This has led to a common error of American biographers, and hence the reader of one of their productions, no matter how gracefully written, leaves it with no accurate, distinct, clear apprehension of any one or the other marked characteristic, and with only a very poor idea of the real force and weight of the man whose life was no service to him in the telling, and whose real merit he is therefore too apt to depreciate. When this same sort of writing is applied to the lives of authors and thinkers, when we are told simply where and when they lived and wrote, instead of how and how effectually they thought and were influenced, the labor of the biographer, it makes little matter how industrious or how earnest he may have been, is thrown away; for instead of giving us the account of the life of his mind, that in all original authors which is of interest and of use, he has simply told us that which was no more interesting than the same relation of any of the unnumbered men who are born and live and die without leaving a trace of their existence. Mr. Carlyle has shown what should have been the course of such a biographer, and no better rules are to be found than his:

"If an individual," he says this in a notice of the Life of Robert Burns, "if an individual is really of consequence enough to have his life and character recorded for public remembrance, we have always been of opinion that the public ought to be made acquainted with all the inward springs and relations of his life. How did the world and man's life, from his position, represent themselves to his mind? How did existing circumstances modify him from without, how did he modify these from within?—with what endeavors and what efficacy rule over them, with what resistance and what suffering sink under them? In one word, what and how produced was the effect of society on him; what and

how produced was his effect on society? He who should answer these questions in regard to any individual, would, as we believe, furnish a model of perfection in biography. Few individuals, indeed, can deserve such a study, and many lives will be written, and for the gratification of innocent curiosity ought to be written and read and forgotten, which are not, in this sense, biographies."

There can hardly be any occasion for apologizing for the quotation of a passage which so aptly marks off and simplifies the duties of a biographer; and with this for a text, it would be well to inquire how far the requisites therein mentioned, are to be found in the mass of writing called American biography, how much of that writing is ineffective and useless, just because its authors have paid no regard to any rule or method, and how best to explain and introduce rules for biographers, that there may be no more reason to complain that

"Men's evil manners live in brass:
Their virtues we write in water."

But an objection may be made, that while these rules apply to the lives of men whose literary and mental labors chiefly interest us, or to those who have been great and useful without doing or suffering personally, they do not furnish such minutiae of the heroes or rulers or travelers or what not, whose busy, active, bustling, changing lives and adventures are their chief interest. It is a rare thing to find a historian who will condescend to the unimportant narration of processions and ceremonials; yet the conduct of one or another famous personage upon just such occasions is very often a strong mark of his character, and after the principal and leading events of his life are known, it is these which chiefly interest men, and most often are made the occasion of the frequent memorials by which honest and honorable anxiety to perpetuate greatness is oftenest and best shown. The description (not a very common one) of Washington's receptions when he was President, if better known, might do a good deal towards lending the charm of dignity to the same ceremony in our days, when, without gaining either in simplicity or effectiveness, they have become ridiculous and unbecoming exhibitions of our Chief Magistrate. Our first President did not enter the room until all the officials and guests to be presented had taken their place in a

semi-circle. He then entered with his aids or private secretaries, when the secretaries and officers of state first presented themselves; then persons to be introduced were next presented simply and quietly; afterwards, while they all stood, the President passed from one to the other, now stopping for a few minutes' conversation, but oftener just making the usual compliments of such occasions; he then retired, refreshments were handed round, and the company soon left. Whether this tradition be true in all particulars or not, is of no moment; but surely there was just as much of republican simplicity as there is now, with far more comfort. But such anecdotes and relations may well be left to the ingenuity of biographers for proper introduction, just as they now are to tradition-mongers for safe keeping. Yet that biography which of all others should be in its execution as it is in its subject, the great example for all succeeding times, even the *Life of Washington*, is simply, too simply "confined to a biographical sketch, introducing events and incidents in their natural order, with no other marks or reflections of his (the author's) own, than such as seemed necessary to preserve just proportions in the parts, and a unity in the whole." We are, to be sure, referred to his works for his real life; but they are too massive in proportion, and are too stately and too solemn to be much read, besides failing in showing the real virtues of the author in any case where there is real modesty and real worth, which can be best done, and in Washington's case can only be done, by a full revelation of his private and familiar intercourse. While family letters and state papers all go to make up the necessary and true memorials out of which history is to be framed, it is hardly fair, when looking for a familiar and life-like representation, effective both in its truth and its simplicity, to be referred to that which may be fairly described as forming a gigantic statue in which the face alone has the charm of likeness, and even that is lost on us, because the limbs are either wrapped in outlandish garments or left in a very startling and uncomfortable nakedness. Preferable to this would be familiarity through an autobiography; because, whatever other objections there are, it must be true, after a certain manner, even in spite of the writer himself; but then the reader has to be a penetrating and careful one to tell where it is that the truth is told fairly and fully, and where after a shabby, equivo-

cating manner, and where what is sought to be concealed is that which is principally characteristic, the real lasting and permanent truth being nearly always pretty well hid or uneasily slurred over.

Our biographers too often forget the uses and the lasting excellence of a good life: they are apt to begin with too extended a plan, to become wearied when difficulties and obstructions detain and mislead them, and then to dwindle down into mere retailers of simple deeds and dates, without asking or looking for the origin or motives of the former, and without elaborating and displaying the relations and influences of the latter. An eloquent biographer of an interesting time, Mr. Roscoe, has mentioned the necessity of such generalization, with equal grace and truth. A great beauty of his works, devoid of interest or use as are the minutiae of the time of which he writes, is found in the very intimate connection which he has always sought to keep up, and to exhibit clearly and precisely, between the life of the man whose biography he gives, and the history of the time in which he acted the part that secured him fame and renown. By this method, besides a mere dry record of events, we get at "the opinions of men of genius, ability and learning, who have been agitated with all the hopes and fears to which such events have given rise, and have frequently acted a personal and important part in them;" and even better than this, we secure the most important uses of the most successful biography, because "by such means, we seem to become contemporaries with those whose history we peruse, and to acquire an intimate knowledge, not only of the facts themselves, but of the judgment formed upon such facts by those who were most deeply interested in them." Although Mr. Roscoe does not mention it, yet he must have thought as he wrote his *Life of Leo the Tenth*, of the effect which particular men have upon the exterior events, the occurrences of state, the visible changes and revolutions, all things that go towards making up history, but which in their dry detail, cease to interest even the most zealous student, become an unmanageable mass of dull material, not capable of being moulded even by the cleverest writer, and then, falling into the hands of book makers, constitute modern history. Most American biographers forget what one of the best of their number

has so well said.¹ "The history of the Revolution," Mr. Reed says, "is not written, and cannot be, till the biographies of the men who made the Revolution are completed." Most of them treat of men who lived in what has been happily called the heroic age of America, and they should therefore carefully study any clever saying of the author of "The Life of Joseph Reed," partly because it is not unlikely that a large part of General Reed's fame is owing to the excellence of his biography, but chiefly because it is so sound and good.

One of the most serious errors, yet one which is nearly the commonest, into which biographers fall, is a want of judgment in the use of authorities. It is so much easier to trust to what is written and printed and is at hand, than to hunt up old and forgotten sources of information; and besides, it is so much more convenient to show for one's authority books in every one's possession, or papers accessible to every one, than industriously and critically to collect and collate new means of describing some well known man, which may perhaps make some part of his career less famous, as it is made more like what an ordinary man would have done in the same case, or may entirely contradict the usual current of opinion on one or another remarkable act; for in the

¹ It is a fault, to make the lives of men who all acted together stand each by itself: it might and ought to be corrected in those serial lives edited by Mr. Sparks, so that we should not, as we now do, read very different accounts (both pretending to be original statements) of events about which doubt and uncertainty ought to have ended when the parties on either side died out, as is now the case almost without exception, in every one of the numerous squabbles (very few of them deserve the dignity of a better name) which grew out of the unwise legislation of the men who had been such wise warriors and such prudent patriots; and while the restless energy of some, and the desperate genius of others in the great struggle, have been frequently and well commemorated, there are very few accounts of the contentions and differences which marked the period between the formation of the Articles of Confederation and the adoption of the Constitution. A full and fair account of the life of some man who was an active partaker of all of these periods is very desirable; but it should be some one not so far removed as Washington was above the common motives, the ordinary influences and the personal rivalries, that originated and nurtured these dissensions; nor should it be, like Adams, the life of the diplomatic leader of the Revolution; but that of some stirring and active man, who would show out fairly the struggles of our *peaceful* Revolution.

lives of some really great men, some whose part in the politics or diplomacy of a great nation may have been of the utmost importance, and productive of such consequences that their influence, whether for good or bad, demands a full and clear account of all the circumstances connecting them with the time in which they lived and the people whom they benefited or injured, there may have been but one act on which hinged all their greatness, but a short time which showed them other than the multitude around them; and there will have been formed, almost of necessity, an opinion in regard to this man, and this act, and this time, which no biographer will willingly or without hesitation undertake to correct and change, no matter how far it may be from what he knows to be true. It is for doing this in just such a case that we are so much indebted to M. Guizot for his *Life of Monk*; and he has pointed out the difficulty of writing, and the importance of writing well, the account of such a man's career, in a few simple but very happy phrases: "Monk is one of those whose talents and even vices have but a day or hour for the development of their full energy and dominion; yet they are the men whom it is most important to study; for the rapid drama wherein they took a leading part, and the events which it was in their sole power to accomplish, can be through them alone made thoroughly intelligible."

Besides the difficulty of finding new authorities and making new opinions out of them, there is a difficulty, and a very serious and considerable one, in determining the amount of trust to be put in those at hand, some of which may have grown into popular favor and belief too, while an accurate examination may prove pretty convincingly that others, of less importance in the eyes of most readers, may really be those to which more confidence is to be given, both in receiving actual statements of facts and in getting at opinions or judgments formed upon such facts by those who, acting the liveliest parts, naturally felt the deepest interest, and should be to us the best interpreters of their truth or falseness, their error or correctness. In every case where a book is relied on, the author's relation to the men whose actions he describes should be ascertained; his fitness to judge of their motives if he states them, or his purpose in neglecting to do it, if by so doing he may influence the judgment to be formed of them, should be

tried ; his sources of information, their directness and the nature and amount of his own treatment of them ; whether he took all that came to hand, or was in the habit of cutting and shaping to suit himself ; his purpose, whatever that may have been, in perpetuating the means and method of accomplishing some act which perhaps, but for him, would never have obtained its good or bad fame ; its reputation or whatever it may be that commends it to latter times and subsequent writers ; these should all be sought after, and though it would be almost a desperate hope, yet the very effort would in some measure secure its own accomplishment, and in the very purposing to find all this out, even if it end as it begin, there will of necessity have been a comparing and judging that will have served greatly to help a sound mind or to strengthen a wavering one.

The simplest characteristic of anything set up for an authority, the slenderest influence affecting anything that may be a source of information, the slightest peculiarity of style, or the merest breath of uncertainty, the shade of a shadow of an unfair influence, all are to be fully, fairly and carefully weighed and considered by every honest biographer. The difference of sex is not without its importance, and a clever essayist has done the state some service in describing wherein a woman's pen is more useful than a man's. A careful reading of his description, and a careful use of the rules one may deduce thence, will be of no small service in judging of the merits and reliability of the many memorials which women are apter to perpetuate, as well of men truly great as of those of very ephemeral reputation ; the perpetuation of their weaknesses, in itself absurd, makes the same office in regard to persons whose every act is of interest, ridiculous. Mr. Hazlitt, in his essay on the English novelists, thus speaks of this matter: "Women, in general, have a quicker preception of any oddity or singularity of character than men, and are more alive to every absurdity which arises from a violation of the rules of society, or a deviation from established custom. This partly arises from the restraints on their own behavior, which turn their attention constantly on the subject, and partly from other causes. The surface of their minds, like that of their bodies, seems of a finer texture than ours, more soft and susceptible of immediate impulses. They have less muscular strength, less power of continued voluntary attention, of

reason, passion and imagination; but they are more easily impressed with whatever appeals to their senses or habitual prejudices. The intuitive perception of their minds is less disturbed, by any abstruse reasonings on causes or consequences. They learn the idiom of character and manners as they acquire that of language, by rote, without troubling themselves about the principles. Their observation is not the less accurate on that account, as far as it goes, for it has been well said that 'there is nothing so true as habit.' " But none of these characteristics or peculiarities are at all difficult to any but the very inexperienced student. Care and attention will soon show to which of these or the many kindred faults the book or the writer leans, and how, in using the one or trusting to the other, there is need that pains be taken always to guard against a too implicit belief or too ready a dependence; yet there are repeated instances of books, and most of all of books of biography, pretending to fairness and impartiality, in which nevertheless there is a covert determination, under a guise of familiar and intimate acquaintance with all needful facts; to perpetuate a one-sided and prejudiced account of some one, not generally the real subject of the book, but one who is often of more real importance and more earnestly inquired after. It is not unfrequent, in a fair life of a king, to see a terribly distorted character of his prime minister; or in the account of a great embassy or negotiation, to write all the leader's acts fairly, and to distort the conduct of some one or another secretary or assistant, ostensibly an inferior, but really, as subsequent facts may show, the chief dependence and originator. The difficulties of such cases, and they are very plenty, cannot like other simpler errors need only to be shown to be avoided, and yet no positive rule will serve for them. The large discretion which is entrusted to every biographer, then, must be used, but very painstakingly.

Every one acknowledges, and very willingly, the innumerable instances of the predominating influence of a powerful, an accomplished or a fortunate individual, on the character and manners of the age in which he lived, as well as the great usefulness and in fact the necessity of perpetuating not only the particular circumstances which first or last were thus effective, but the minute details, the more familiar conduct, the commoner as well as the greater incidents, the patent and the latent defects and

advantages, intentions and actions, all that go to make up such a career, yet how rarely are these perpetuated! The very endeavor is uncommon, and successful execution is *rarissima avis in terra*. A review of the life of the Earl of Peterborough, by Eliot Warburton, in Frazer's Magazine, said, in Biography, "all diligence and research are vain, unless accompanied with the power of conceiving and reproducing a distinct picture of the men, manners and times about which one is writing, that power of seizing upon characteristic details which is the *sine quâ non* both of novelist and biographer, of Fielding and Boswell. It is no use taking up a subject for biography, unless the author has both the power and the will to familiarize himself with the places that his subject lived in, the books he read, the hours he kept, the friends he saw, and so forth; and so to acquaint himself with the individual and his times, as to be able to discriminate between what was peculiar to the one and what was common to the other." These difficulties the reviewer said were corrected by novelists, and he continues (we would not like to say how accurately, but very happily), "the great masters of fiction are the comparative anatomists of the mind, and will build you up a life of thought, emotion and action, from a scanty basis of history, just as Owen will construct a perfect monster by induction from two or three casual bones."

There is no small difficulty in knowing how to select the subject of a biography; for while we are cognizant of the usefulness of good examples, yet it is not an easy task to separate the dignified and noble actions, which we know to be the result of grand designs and elevated sentiments, from the mere effusions of passion and the effects of temper, which are apparently important from the considerable station of the actors. The greater distance from the time of their occurrence lends, as it always does, dignity even to the commonest action, and thereby induces us to hunt out reasons for the most unaccountable vagaries, as well as to find meaning in the most ridiculous actions of great men, or rather of men in great stations. But because we find that a great soldier became famous from fear of blame, rather than from an ambition really deserving the name, or to make his own fortune rather than to advance that of his country, or to degrade others rather than to elevate and advance and enrich them, we are not entitled to be satisfied with a simple narration of events,

leaving to conjecture, or to personal research, the connection and influence with other different transactions of the same period. It was this method of isolation, this system of imperfect histories, against which Lord Bacon earnestly and beautifully pleaded, and his simple and eloquent praise of Biography will supply a graceful conclusion. It is from the second Book of the Advancement of Learning: "For Lives, I do find it strange that these times have so little esteemed the virtues of the times as that the writing of lives should be no more frequent. For although there be not many sovereign princes or absolute commanders, and that states are most collected into monarchies, yet are there many worthy personages that deserve better than dispersed report or barren eulogies. For herein the invention of one of the late poets is proper, and doth well enrich the ancient fiction: for he feigneth that at the end of the thread or web of every man's life, there was a little medal containing the person's name; and that Time waited upon the shears, and as soon as the thread was cut caught the medals, and carried them to the river of Lethe; and about the bank there were many birds flying up and down, that would get the medals and carry them in their beak a little while, and then let them fall into the river; only there were a few swans, which, if they got a name, would carry it to a temple, where it was consecrated. And although many men more mortal in their affections than in their bodies, do esteem desire of name and memory but as a vanity and ventosity,

"Animi nil magnæ laudis egentes;

"which opinion cometh from that root, '*non prius laudes contempsimus, quam laudanda facere desivimus;*' yet that will not alter Solomon's judgment, '*Memoria justi cum laudibus, at impiorum nomen putrescet;*' the one flourisheth, the other either consumeth to present oblivion, or turneth to an ill odor, and therefore in that style or addition, which is and hath been long well received and brought in use, '*felicis memoriæ, piæ memoriæ, bonæ memoriæ,*' we do acknowledge that which Cicero saith, borrowing it from Demosthenes, that '*bona fama propria possessio defunctorum;*' which possession I cannot but note that in our times it lieth much waste, and that therein there is a deficiency.

"As history of times is the best ground for discourse of gov-

ernment, such as Machiavel handleth, so history of lives is the most proper for discourse of business, because it is most conversant in private actions. Nay, there is a ground of discourse for this purpose fitter than them both, which is discourse upon letters, such as are wise and weighty, as many are of Cicero *ad atticum* and others. For letters have a great and more particular representation of business than either chronicles or lives."

THE GLACIAL EPOCH.

THAT an arctic climate once existed over great portions of the temperate zones of both hemispheres is a theory universally accepted by geologists. But it offers to the general reader of scientific literature difficulties so great, that its acceptance by them is almost as much due to faith as to rational conviction; and perhaps that faith has been subjected to repeated and severe trials by geologists of good repute, who have made an extravagant and even reckless use of the theory. The difficulty of accepting the belief in an epoch of low temperature must disappear in the face of evidences; but this conclusion, satisfactory enough in itself, has been burdened with corollaries so unjustifiable, that they have darkened the subject instead of illuminating it.

The evidences, although cumulative, and made of a vast body of facts, is yet of a simple order. Scattered over Europe and the Northern States of our own country are innumerable patches of coarse materials, of which the peculiar texture contrasts strongly with the rocks and covering of the surrounding country. They consist of coarse aggregates of the most heterogenous materials, of all sizes, from fine sand to boulders, thrown together without order, as if they were the scrap-heaps of chips and filings which had been swept there after the work of sculpturing the earth's surface had been completed: and in truth this likeness is something more than a metaphor. The pebbles are fragments of all the common rocks known to the geologists. They are frequently smoothed and rounded as if they had originally been shapeless lumps subjected to prolonged attrition. They are not consolidated like the ordinary rocks, of which the hills and coun-

try at large are composed, nor like the conglomerates formed in many localities, but lie imbedded in finer gravel and sand, when they can be shoveled up without the aid even of a pickaxe. An examination of the material of which the pebbles are composed generally reveals the fact, that neither in the rocks below the beds, nor in the immediate vicinity of their borders, can any similar materials be found, and in many cases it can be asserted with entire confidence that the parent rocks from which they could have been derived lie scores of miles away. Another series of similar facts is disclosed by the examination of boulders. Throughout the New England States the traveler frequently passes broad fields, in which irregular masses of rock, weighing from a few hundred pounds to hundreds of tons, lie as if sown broadcast over the surface. Sometimes a large one is found perched upon a hill-top and quite isolated from its kind; sometimes a herd of them is lodged upon a hill-side. Their attitudes are frequently almost grotesque, as if they had been put in their places by playful design; and some instances, like the well-known rocking stones, are astonishing. The boulders are almost always erratics, their constituent material having nothing in common with the ground whereon they lie; but seeming to have been transported thither by some agency which is not apparent, and from localities far distant. The peculiar character of these disorderly beds and scattered boulders attracted the attention of the earlier geologists, who recognized the wide difference between them and the rest of the rocks which make up the visible shell of the earth. They perceived that the Neptunian theory of Werner, by which they readily explained the origin of all stratified rocks, was inapplicable here. That the strata are composed of materials washed down from the land into the ocean, precipitated upon its bottom, and finally indurated, was a doctrine which every succeeding discovery tended to confirm. It was intelligible though only when applied to soluble materials and fine silt; but when the transportation of boulders, pebbles and gravel, called for explanation, its irrelevancy was at once manifest. The speculations which were put forth on this subject are worthy of some mention.

While Dalton was working out the atomic theory, and Young the undulatory theory of light; while Cuvier was writing the *Regne Animal*, and Von Baer his work on embryology; while

Fourier, Regnault and Carnot were investigating the laws of heat and building a sure foundation for the science of molecular physics, their contemporaries were groping about in geological speculations which seem to be characteristic of the dark ages. So far as geology was confined to a mere record of facts it was respectable enough even in that day. But when the old geologists passed from facts to theories, they were almost contemptible. A good illustration of this is to be found in the speculations which were rife in the first two decades of the present century concerning the origin of the drift deposits. Deluc, a Genoese naturalist, residing latterly in England, and the author of numerous geological works of some celebrity, thought these deposits were formed by showers of stones and gravel which had been thrown upward by the volcanic forces which uplifted the mountains, and had fallen again at great distances. Dolomieu explained the origin of the drift and boulders in Switzerland by supposing that an inclined plane formerly connected the Alps and Jura, down which the stones had been rolled by volcanic convulsions, and that the same disturbances had sunken the valleys which now lie between the two ranges. There were many geologists who believed that the deposits were debacle washed along by the Noachian deluge. Others preferring a less violent hypothesis argued that they were the remains of old strata decomposed by ordinary meteoric agencies. Early in the present century there was little hesitation in appealing to great cataclysms, or earthquake waves, conceived as originating in violent and sudden upheavals of the ocean bottom, "breaking up the great fountains of the deep," and rolling the waters far up on the land; and a favorite doctrine was, that these gross deposits were the sand and rolled stones of the ocean swept inland by cataclysms. A converse form of this view attributed them to the recoiling of the waters as great mountain chains and plateaux were suddenly uplifted.

But the progress made in other branches of physical and natural science, and which was due chiefly to the rigorous and exhaustive methods adopted in the investigation of facts, at length had its effect upon geology, and it began to be felt by some of the more philosophical students, that it was useless to generalize until the facts were more accurately known. Venturi had suggested that the boulders and unstratified superficial masses along the Po, had

been brought down from the Alps by a former great extension of the glaciers; and Venetz advanced a similar explanation in 1820 for the origin of the boulders of the Jura. To Agassiz, however, must be conceded the credit of having fixed the glacial hypothesis upon a basis of positive evidence, compared it with a multitude of most carefully observed facts, and shown its substantial harmony with them. Several years of his early manhood were devoted to the study of the glaciers and boulder deposits of Switzerland, and in 1840 was published his *Etudes sur les Glaciers* and *Système glacière*. In these works are described the origin, movements and mechanics of glaciers, in a manner so accurate and thorough, that little has been added to our knowledge of the subject since their appearance.

The researches of geologists before Agassiz had indicated the probable existence of larger glaciers than those now seen in the Alps. De Saussure asserted, many years before, that the boulder formations in the valley of the Rhone were old terminal moraines of glaciers, which had receded far up the mountains. But Agassiz showed that the boulders of the Jura must have come from the Alps, and the intervening valley, one of the deepest and grandest in the world, must have once contained stupendous glaciers, vastly exceeding in magnitude any now known outside of the polar regions. The upper Alps are composed mainly of gneisses and crystalline schists, and the boulders, "as large as cottages," lying up against the slopes of the Jura are of identical composition, while the Jura themselves are composed of sandstones and limestones. The geology of Switzerland is too well known to admit of the least doubt that the erratics in question came from the Alps, and it is certain that no other vehicle than ice hitherto conceived of could have transported them. Moreover, their attitudes and distributions are such as conform well with the glacial theory. On the Southern side of the Alps in Piedmont, the same evidences are found of the former great extent of the Alpine glaciers.

This conclusion was readily accepted by geologists, and was immediately applied with most satisfactory results to other regions; unquestionable evidence was at once produced that from the highlands of Scotland, Wales and Scandinavia, vast glaciers had descended, scattering the debris of the mountains over the valleys

and plains in the same characteristic manner, half order, half disorder. Each separate mountain system in the north of Europe was soon shown to be a nucleus, from which had emanated the widely scattered fragments, of which the extraordinary locations and unaccountable origin had so long been an enigma. But soon a new difficulty arose. Some of the erratic blocks were found in localities so far from their original source that it was apparently incredible that they could have been transported by glaciers. In the Steppes of Central Russia, Murchison and De Verneuil found blocks of gneiss and mica schist scattered over the soil, while it was known that no rock of that character existed *in situ* nearer than Sweden—a thousand miles away. Many fragments were found in Norfolk, in Belgium, Denmark and Prussia, which could have come from no place nearer than Scandinavia. Finland and Poland were thickly strewn with them, and they were soon traced far southwards towards the coast of the Black Sea. The glacial theory as Agassiz originally propounded it, and as it was at first received by geologists, merely postulated a former extent of glaciers far greater than at present. The inference was founded upon purely *à posteriori* evidence, but so is all scientific reasoning from facts to causes, and the argument was none the less valid on that account. But glaciers, as we now know them, all have their origin in elevated regions, and descend by force of gravity into the valleys and plains. A glacier running up hill, or even over a level surface, certainly calls for further explanation, especially if it has a thousand miles to travel. As soon as facts became sufficiently numerous or sufficiently well observed for careful comparison, it appeared that a large portion—even the greater portion—could not be satisfactorily explained by assuming the great extension of glaciers originally proposed by Agassiz. The moraine arrangement was intelligible enough, and the careful studies of Guyot in Switzerland left no doubt that their former positions and courses had been correctly mapped by him, from the blocks and detritus which they had abandoned when a warmer climate came and melted them. The eye, glancing over the former site of one of them, does not discern any order in the arrangement of the boulders, for the same reason that it does not recognize that the earth is round; but when their positions are marked on a map of suitable scale, the moraines, if they are there,

will appear conspicuously. While the existence of innumerable old moraines was demonstrated, it was soon shown that this mode of occurrence was limited to the vicinity of mountainous, or hilly countries, and was wanting in broad plains, where there was no lack of boulders and gravel. To meet these difficulties the speculations of geologists diverged in two directions. Some thought the success of the glacial theory so complete, as applied to one class of the phenomena, that it could readily be applied to all of them, by extending it still further. In place therefore of a large number of glaciers of much greater magnitude than at present, they resorted to the extreme supposition of a single glacier, covering the whole northern and perhaps also the southern hemisphere, as low down as latitude 40° , with a blanket of ice a mile or two in thickness, and moving ever towards the equator.

Only the most elevated lands were supposed to overtop its surface. To its immeasurable abrading power were attributed the grinding down of the mountains and hills, the scooping out of lake basins, valleys and fiords, and the detritus thus ploughed up was conceived to be carried along in the resistless march to the warmer climes, when it was dropped by the thawing of the borders. What power could urge on this mass in one direction, regardless of the conformation of the land, has not been satisfactorily explained. It has been suggested that the ice sheet would be thicker in the higher latitudes, and thus its own mass would be a barrier to movement towards the north, while the inferior thickness towards the south would be equivalent to a yielding in that direction. This extreme glacial theory was warmly advocated by Agassiz, and many eminent naturalists who had made the glacial phenomena subjects of long and careful study. Agassiz even "capped the climax" by urging that he had discovered in South America indubitable evidences that the tropical portions of that continent had shared in a universal system of glaciation, and had once been covered with a vast system of glaciers.

Other geologists inferred that during the glacial epoch Europe and North America had been submerged, except the higher or mountain regions, that from the islands and shrunken continents remaining the glaciers brought down the detrital matter, and breaking up into bergs, they floated over the sites of the present

land, and dropped their loads as they melted. A similar process may be witnessed to-day upon a grand scale in Greenland, and upon a scale still grander in the Antarctic ocean. In both hemispheres recent exploring expeditions have dredged up from depths exceeding a thousand, and even two thousand fathoms, pebbles mingled with the impalpable ooze of the bottom, which indicate unmistakably just this origin. This explanation is a reiteration of what may be called the moderate glacial theory, supplemented by the assumption of submergence.

Both of these hypotheses are beset with difficulties, in so far as they exceed the moderate glacial theory. Against the extreme hypothesis the objections seem to be insuperable. In the first place it does not subserve the purpose for which it was intended, because it does not explain the facts. The essence of the problem is as follows: Given certain masses of boulders, sand and gravel, found a hundred miles or more from the nearest rocks of the same kind, how were they brought to their present positions? What is wanted is a transporting force—not only a vehicle, but something to propel it. The extreme hypothesis supplies the former, but not the latter; it is a doctrine of force with the force left out. Glaciers as we know them move down declivities, never less than eighty feet to the mile, and this is as true of the glaciers of Greenland as of the Alps. The present profiles of continents, along meridians from the Arctic circle southward, now slope *upwards*, with few exceptions, and none of them supply the required conditions of movement. It has been frequently suggested that the lands to the north were much higher during the glacial epoch than at present. But this supposition is so purely gratuitous, that it gives no standing place for any argument whatever, either for or against it, and is certainly weighted with a heavy burden of proof. Of evidence it has none. The supposition already mentioned that the greater thickness of ice at the north, and the attenuation towards the south, might effect the propulsion, is one which might be tolerated by those who are not in the habit of analyzing and measuring forces, but it will surely be rejected by the physicists who may choose to examine it critically.

The evidence of a continuous ice-sheet is far from being conclusive. The facts upon which the strongest reliance is placed are the grooves and scratches upon the rocks high up on the

mountains, bearing a strong resemblance to the undeniable glacier markings of Switzerland. To present accurately and intelligibly the facts connected with them, and to estimate correctly their value, would be a work of great difficulty and magnitude. It is not our purpose to deny that they are evidences of glacial action, and it is fully conceded that no other intelligible explanation of their origin has been suggested. They may be accepted as corroborative circumstantial evidence in favor of the theory of a former great extension of the glaciers, but taken by themselves, they are obscure hieroglyphics of which we have no assured meaning beyond the fact that we know nothing of their origin unless they indicate the former presence of large masses of ice. But the passage from this limited conclusion to the extreme glacial hypothesis, guided by such obscure evidence, indicates a recklessness in speculation, which would be tolerated in no branch of science except geology. The directions of the grooves throughout North America vary widely, though the mean direction is conspicuously north and south. In some instances the directions appear to indicate that the movements of the supposed glaciers were strictly controlled by the conformation of the hills and valleys, but in many others it is otherwise—the grooves making large angles with the axis of the valleys. They are found at all altitudes, from the summits of the highest mountains, to the lowest valleys, wherever the most durable rocks are exposed. The supporters of the extreme hypothesis apparently assume, that if an enormous thickness be given to the continuous ice-sheet its movement would be independent of the local conformations of the country, and would be controlled by the general profiles of the continents. But if the mean continental slopes are to furnish the required force, it is difficult to understand how any movement could take place in such a mass, pinned and doweled to its bed by thousands of hills and mountains. Such a tremendous conclusion from premises so obscure and indefinite, suggests the inquiry whether its supporters have not been taking most unjustifiable liberties with the Great Unknown.

The iceberg hypothesis also presents difficulties. It is properly an adjunct and supplement to the moderate glacial theory. It assumes that during the glacial epoch a large portion of the land in the Northern Hemisphere was submerged. Geologists have

been in the habit of postulating repeated and frequent sumergencies and emergencies of land, and indeed if these postulates be not true, then geology is not a science, but a delusion. But the very frequency of their occurrence, at certain epochs and places where the evidences are perfect, seems to have bred in the minds of some naturalists a habit of appealing to them without evidence, as if they were, *à priori*, so probable, and so easy of occurrence, that they ought to pass without scrutiny. Thus, Dr. P. L. Sclater, an eminent zoölogist and secretary of the London Zoölogical Society, having studied the mammals of Madagascar, and found them most nearly related in type to certain mammals of South America, and the West Indies, inferred the existence, at a recent epoch, of direct land connection between the two regions, and proposed for the imaginary continent the name "Lemuria." It is quite impossible to deny Dr. Sclater's conclusion, although it is obviously as complete a *non sequitur* as could well be imagined. It is always well to deal with every suggestion of a change in the level of the land (or ocean) as cautiously as possible, for we know as yet absolutely nothing of the causes or forces which have brought up the lands from the waters, and sunken ancient continents beneath them; and all such conjectures are mere appeals to mysteries, unless they are sustained by independent evidence. What evidences do we possess of extensive submergence during the glacial epoch?

Throughout Siberia and Northern Europe, throughout New England, and the States north of the Ohio and east of Nebraska, and throughout the country sloping into the Pacific north of San Francisco, may be seen many beds of sand inclosing boulders, cobble-stones and pebbles, which are worn and rounded as if by running water, or the action of waves. The cobble-stone is perhaps a fair type of the contents of these formations. Sometimes they exhibit traces of stratification, which is frequently quite well marked, and occurs generally near the surface of the deposit. They bear a striking resemblance (indeed the resemblance is such that it is the resemblance of identity) to the stones, sand, and gravel found in brooks and rivulets, and on the shores of lakes, and on sea-beaches which border high and rocky coasts. It is impossible to resist the conclusion that the deposits have been subject to the action of water in motion, for they are in all essential re-

spects similar to those deposits which we know have been so wrought upon, and no other agency that we know of is capable of producing similar effects. They are found at all altitudes, from a few feet to 1,500 feet above the present level of the ocean. They seldom contain fossils, and in this country none have yet been found belonging to the true glacial epoch. In Great Britain and Scandinavia, the fossils are tolerably common in drift deposits not higher than 525 feet, and in Wales they have been found at an altitude of 1,550 feet. They are marine shells and belong to well known existing arctic species. The submergence of Wales to a depth of more than 1,500 feet during the glacial epoch is regarded by the English geologists as resting upon direct and satisfactory evidence. In America, while deposits having essentially the same character are found at corresponding elevations, they have not yet yielded any fossils. This is not surprising, since the mechanical structure of drift is of such a character that we ought not to look for them except in rare instances. The older formations of undoubted marine origin which most resemble them (the conglomerates) are equally barren of organic remains. The supporters of the extreme glacial hypothesis therefore object to the conclusion that these deposits are old sea-beaches, and maintain that a submergence so general and so deep as would be required to satisfy that conclusion is a hypothesis too violent to be accepted without evidence of the most demonstrative kind. This caution is certainly commendable, but it is extraordinary in those who do not hesitate to support the still more violent hypothesis of a continuous ice-sheet upon no better evidence than grooves and scratches upon the rocks.

But there is abundant evidence that just before the maximum rigor of the glacial climate came on, and also that after it abated, there was either a general depression of the land, or an elevation of the ocean level in many widely separated localities—in Sweden, Germany, Great Britain, and the whole of the United States—amounting in some cases to at least 550 feet. The later pliocene formations are found in those regions at that altitude, and they abound in marine fossils, frequently to such a degree that they are composed almost wholly of marine shells. They indicate clearly the approach of that long strange winter, by the more northerly, and even arctic character of the shells, as compared with those

which underlie them. As we pass into the glacial epoch proper, we lose the fossils, but the stratified deposits are found at greater altitudes. With the return of a milder climate raised sea-beaches also reappear, containing an abundance of fossils. One of the conspicuous features of the landscape in the river valleys of New England and Canada, is due to those formations usually called terraces. They are found on the banks of the St. Lawrence and its tributaries, and on most of the rivers, great and small, throughout New England: they overlook Lake Champlain, and appear conspicuously in the rivers of the Pacific coast. It is certain that the gulf of St. Lawrence at this epoch extended over the site of Lake Champlain, and connected with New York harbor, and that New England was an island. Beds of arctic shells are now found in Vermont, and bones of whales and seals have been exhumed from the terraces of the St. Lawrence near Montreal. The height at which marine shells are found in Canada, ranges from 100 to 550 feet, and they are found in still more lofty situations further north. Thus we find, at the beginning of the glacial epoch, that the sea covered the present land in many widely separated regions of the northern hemisphere, and at its close it still prevailed. During the later pliocene the depth of this submergence increased, and during the terrace epoch it diminished, having reached its maximum during the glacial epoch itself. How deep this submergence may have been we have no means of deciding. The advocates of the iceberg-hypothesis require more than 2,000 feet to satisfy their arguments, including in the submerged area most of northern Europe and America, north of the Ohio river. A revolution in physical geography so great as would thus be implied must be treated with the greatest caution and reserve, especially in view of the incomplete evidence which can be brought to sustain it.

There is one point connected with the changes of level in continental areas, which is of some importance in this connection, and which, though perfectly obvious, does not seem to have been sufficiently considered by geologists. While elevations and subsidences are postulated with a freedom which may readily astonish the less speculative student of physical or mathematical science, very little use seems to have been made of the necessary corollary of elevations and subsidences, that the position of the level of the ocean itself, referred to the centre of the earth, must be variable.

It is clear that no land once forming part of the ocean bottom can be thrust above the surface of the water, and no land can sink below it, without at once changing that level. There is of course the possible case that the effects of elevation in one place may be exactly counterbalanced by the effects of subsidence in another; but the probabilities against such a balance are practically indefinite, and hence, if it be granted that any part of the ocean bottom, or of the adjoining coasts, be subject to vertical movements, the level of the ocean is itself unstable, and must oscillate irregularly about a mean. Nor should we infer that the amount of this oscillation from epoch to epoch is necessarily immaterially small. When we consider the vast areas which have been upheaved in a short period, and the great altitudes they have reached, we shall find abundant room for the opposite conclusion. The great plateau of Thibet has attained an altitude of 14,000 feet since the close of the eocene, and the loftiest peaks of the Himalayas began their sublime ascent from thousands of feet below the surface of the ocean at a comparatively recent epoch. Some areas of the Mediterranean have been uplifted at least 3,000 feet so recently that the shells of the strata almost all belong to living species. The great desert of Sahara has, in many of its parts, and perhaps through its whole extent, been laid bare within a very recent period. Almost all that we know of the geology of the Pacific islands is embodied in the single fact that this area is now, and for the recent geological past has been, an enormous area of continuous subsidence, amounting probably to thousands of feet. We have only to recall that a diminution of the mean depth of the ocean to the extent of one-tenth of the present mean would submerge nine-tenths of all the existing land of the globe, to satisfy ourselves that the cause appealed to is one of no little importance.

A general subsidence of the land throughout the northern hemisphere is intrinsically more difficult of acceptance than a general rise of the ocean level. All those instances of great regional uplifts, which are established upon incontrovertible evidence, are accompanied with proportionate disturbances of the earth's crust, and manifestations of volcanic activity, and this observed correspondence of facts is without exception. But over most of the regions where glacial phenomena have been most observed, there is no evidence of recent vulcanism, or recent disturbance of the

stratification. No volcanic outburst has occurred in Scandinavia, northern Germany, Great Britain, or the eastern half of the North American continent, since the Jurassic epoch, far back in the Mesozoic age. Since that time we have no evidence of aught but a remarkable quiescence over the areas mentioned. It is, therefore, almost incredible that they should have been simultaneously lowered and raised again several thousand feet, without leaving a trace of mechanical violence to indicate such a momentous change.

On the other hand, the evidence of a sojourn of the ocean over many portions of those areas during the closing part of the glacial epoch, submerging them at least 500 or 600 feet, is too complete to be resisted. The terraces are found everywhere throughout the northern half of the temperate zone, and we have merely to choose whether we shall explain them by a general subsidence of the land, or a general rise of the ocean level to that extent.

It appears then that both the extreme glacial hypothesis, and the iceberg hypothesis with its supplement of submergence, are beset with great difficulties. The extreme hypothesis is the most difficult to refute; but this is because its assumptions are so extravagant, and so far outside of the pale of ordinary scientific reasoning, that there is little room for logical discussion. The moderate glacial hypothesis is much less violent, and lies almost wholly within the limits of fair discussion. It is open to the charge of defective evidence on some important points, but this objection is highly characteristic of many geological inferences, and a fuller and thoroughly digested knowledge of facts may in time remove the difficulty.

The two hypotheses agree in affirming a great extension of the glaciers, and in attributing to them great influence in modifying the geography of the northern hemisphere. There is, however, this difference. The supporters of the extreme hypothesis attribute to the movements of the ice-sheet the most exaggerated effects, such as the planing down of mountains, the formation of great valleys, and the scooping out of large lake basins. The moderate hypothesis infers merely that individual glaciers have cut down their own pre-existing channels to considerable depths, and opened large bays and fiords in coasts. The extreme effects are not established anywhere by proofs. Those who affirm them can

certainly show that the abrading power of a large glacier is very great, but they present nothing which can be considered as legitimate evidence of the existence of such a general abrasion of any land on earth. The great glaciers of Greenland are simply individual glaciers, flowing down the steep slopes of that continent, each cutting its own fiord. According to all observers, the coast of Greenland is comparatively free from perennial ice, except such as occurs in the glaciers, though the interior of the continent is inferred by Rink to be buried under an enormous accumulation of it. But the movable ice along the coast is limited to the glacier streams. We may observe there the power of glaciers to modify coast lines, and we may study in Labrador and in Norway the same phenomena; but they prove nothing but the former existence of individual streams, moving down the mountain slopes to the sea, cutting their channels much as a river, having a rapid descent, cut its channel and valley through the rocks and strata.

C. E. DUTTON.

KINGLAKE'S INVASION OF THE CRIMEA.¹

IN the early part of 1863, about eight years after the death of the Czar Nicholas of Russia had brought to a somewhat sudden close the war which his Empire was sustaining single handed against the United Powers of France, Great Britain, Turkey and Sardinia, Mr. Kinglake published four volumes (Blackwood's Edition) bearing the title of "The Invasion of the Crimea." The distinguished author had been intrusted with the papers relating to the campaign left by Lord Raglan, with whom his personal relations had been quite intimate, all official documents were open to him, and both the French and Russian military authorities had been particularly courteous in furnishing whatever information, within their reach, he desired. In addition to these advantages, Mr. Kinglake had carried on an extensive correspon-

¹ The Invasion of the Crimea: Its origin and an account of its Progress down to the Death of Lord Raglan. By Alexander William Kinglake. Battle of Inkerman. New York: Harper Bros.

dence with numerous officers engaged in the operations of the allied armies, so that the publication of the work was looked for with no little interest. Nor were his readers disappointed in their expectations when the volumes reached them, unless it may have been upon finding that the history had only progressed so far as October, 1854, or less than two months after the landing in the Crimea.

So long a period has elapsed since the appearance of these earlier volumes, that it may be well to recall some of their most salient points. The first is largely devoted to explaining the transactions which brought on the war, and contains one of the most scathing denunciations to be found in modern literature. The author asserts that among the chief causes which led to the Anglo-French interference between Turkey and Russia was the desire of the Emperor Napoleon III. to engage in some foreign war which might divert his subjects from too close a scrutiny of his domestic policy and which, if successful, was sure to more firmly establish him in his newly acquired Empire. This idea, whether justly or not, Mr. Kinglake makes the excuse for introducing in the fourteenth chapter, an intensely dramatic account of the *coup d'état* of December, 1851, and a summary of the character and career of Louis Napoleon, up to that time, which both in its intent and execution is terribly bitter. The facts which he alleges are doubtless, in the main, susceptible of proof, but such passages as we quote below suggest rather the sprightliness of the satirist than the judgment of the historian. It must not be forgotten, however, that they were written and published while the late Emperor was at the very acme of his power.

"It is believed that men do him no wrong who speak of him as void of all idea of truth. He understood truth, and in conversation he habitually preferred it to falsehood, but his truthfulness (though not contrived for that end) sometimes became a means of deception, because after generating confidence it would suddenly break down under the pressure of a strong motive. He would maintain friendly relations with a man, and speak frankly and truthfully to him for seven years, and then suddenly deceive him."

"He knew how to strangle a nation in the night-time with a thing he called a Plebiscité."

"It is a maxim of French politics that, happen what may, a man seeking to be ruler of France must not be ridiculous. From

1836 to 1848, Prince Louis had never ceased to be obscure except by bringing upon himself the laughter of the world.....Before the night closed in on the 4th of December, he was sheltered safe from ridicule by the ghastly heaps on the Boulevards."

In the same strain are these personal descriptions, the first alluding to Prince Louis' foolish descent upon Strasburg in 1836, and the second to his condition while the result of the *coup d'etat* was still in doubt.

"What they (the soldiers of the garrison) saw was a young man with the bearing and countenance of a weaver, a weaver oppressed by long hours of indoor work, which makes the body stoop and keeps the eyes downcast; but all the while—and yet it was broad daylight—this young man, from hat to boot, was standing dressed up in the historic costume of the man of Austerlitz and Marengo."

"Thenceforth, for the most part, he remained close shut up in the Elysée. There, in an inner room, still decked with red trowsers, but with his back to the daylight, he sat bent over a fireplace for hours and hours together, resting his elbows on his knees and burying his face in his hands."

The author's intense dislike of Napoleon III., unintentionally no doubt, influences his opinion as to the Imperial armies and commanders; at least it appears to us that as a rule he does but scant justice to the French troops in his narrative of the invasion and subsequent operations. A notable exception to this rule is the tribute paid to the brilliant advance of the Chasseurs d'Afrique in support of the Light Brigade at Balaclava. Their manœuvre, he justly says, was not only marked by the highest courage, but from first to last was a lesson in cavalry tactics, in strong contrast to the superb, but almost suicidal charge of the English down the "Valley of Death." The "Gallant Six Hundred" will live in the remembrance of men of their race as long as the English language is read; but who shall immortalize the equally intrepid and even more bloody charge of those same Chasseurs d'Afrique when they vainly endeavored to change the fortune of the disastrous day of Sedan. As an eye witness (an Englishman) says, "the long lines of blue jacketed chasseurs, mounted on light Arabian chargers, again and again dashed upon the Prussian infantry, utterly careless of the carnage in their ranks and seemingly only anxious to close with the serried ranks of the foe, until the squadrons were reduced to mere groups of reluctantly retreating horsemen."

There is no part of this history which does not show great care in the preparation ; but in describing the battles in which the British army was engaged, the author is quite unique in the minuteness with which he relates the actions, not only of regiments and squadrons, but of individual officers and men. He strives, and with success, to create in the reader a personal interest in the gallant fellows who did the absolute fighting, rather than to glorify some one hero at the expense of ignoring the many. It is true, his warm partiality for Lord Raglan is apparent, though even he does not undertake to invest that very respectable leader and brave soldier with the attributes of a Wellington or Napier. Indeed, in his pages, as elsewhere, what cannot fail to strike the student of this campaign is the absence of anything like able generalship in the British army, joined to that indomitable pluck which enabled men who were defeated by all rule to keep on fighting until they finally gained the day. Nearly the whole of the fourth volume is devoted to an exhaustive, but nowhere diffuse, account of the battle of Balaclava—the chapters on the affair of the “Heavies” (Scotch Greys, Enniskillens and Dragoon Guards) under General Scarlett with a vastly superior force of Russian cavalry, reading more like a description of the achievements of some of King Arthur’s Paladins than an episode in modern warfare.

The volume just published, after an interval of twelve years, is, as the title page indicates, devoted to the Battle of Inkerman, and has evidently been prepared with an amount of care which exceeds even the previous efforts of Mr. Kinglake. The result is worthy of the labor, and while to fully appreciate the book it must be studied with the maps and plans which accompany the text, there are constantly recurring passages of thrilling interest even to the most careless reader. Briefly stated, the “main fight” consisted in the persistent efforts, lasting from before sunrise until after 1 o’clock, of some 40,000 Russians, advancing in column, to drive from the ridge of Inkerman about one-third that number of English and French.

These repeated attacks displayed a courage only excelled by the valorous troops, chiefly English, who in line, or in small bodies, resisted and finally repelled them. As neither army lost a single gun, and no attempt was made to follow the retiring Russians, the result was rather a repulse than a defeat ; largely due, we think,

to the superior range of the artillery and small-arms of the allies. The great disparity of numbers, however, made the advantage gained very glorious to the victors, though dearly bought in blood—the Guards losing one-half of their force engaged, and other “crack” corps an almost equal proportion. The few extracts we have space for will indicate the character of the action which he so vividly describes. (The author says:)

“Before hearing of these, one should guard one's self against unjust conclusions by acknowledging that the two opposed armies were not made up of such elements that they could afford means of fair comparison between the individual Russian and the individual Englishman: for the first had been one in a chain-gang of weeping peasantry torn out of their homes by some ukase; the other, a sturdy recruit, choosing freely the profession of arms, and now realizing, perhaps, on the Ledgeway, the favorite dreams of his boyhood.”

“Though in some places clear, the atmosphere overhanging the steeps on this Tchernaya front was still in such a condition as to be strongly retentive of smoke, and from this cause, as well as from the abrupt fall of the ground beyond the ledge, it resulted that the enemy's columns when advancing to attack from the east were often unseen by our people until within some thirty or forty yards. At about this distance the mass would in general raise a loud cheer which our people detected as one delivered by order. After executing this shout, the hapless column would continue its advance, but under so terrible a fire that flesh and blood could barely, if at all, endure the ordeal. Whilst still at a distance of several paces the column in general would stop and waver. * *

* * * * * Between the endurance of yet more slaughter and yet another retreat, it could choose. Then—their swords shining high in the air, and waving as in passionate signal—numbers of Russian officers, with a valor our people admired, would spring out to the front, striving eagerly by voice and example to lead on the mass. One young fellow, as though refusing to live in the endurance of successive defeats, held on his brave way to the face of the Sand-bag Battery, climbed up to the top of its parapet, and—followed by only one soldier—leaped down upon the death that was proffered him from a hedge-row of bayonet-points.”

“The foremost of the Russians had not long stopped their advance, when across the dim, narrow space, now dividing them from Egerton's force, they heard English words of command. They saw their foe come to a halt. They saw his long hedgerow of firelocks, now ingrafted with bayonets, bend down, come level, then blaze, and in the instant a pitiless volley tore through their

loose masses in front, and swept down like a blast on the face of the column behind them. Then, from under the new ridge of smoke which Egerton's troops by this fire had piled up along their whole line, there rose the 'Hurra!' of the English, as though in some outburst of joy. Whilst the Russians yet listened to the roar of their enemy's welcome, all before them lay still wrapped in cloud; but presently, those who stood calm, and could look in the eye of the storm, saw here and there, moving in dimness, the shadowy form of a rider, the naked gleam of a sword, then the wing of the 77th, along its whole front, bursting out once more into sight through the bank of the smoke, and tearing straight down at a run, with bayonets brought low to the 'charge.'"

The column thus attacked with the bayonet "broke before the swift-coming line had yet touched it with steel," but soon reformed and once more advanced.

"The fighting at this time grew closer, and here and there it was hand to hand. In some instances our people grew furious against the weight of numbers which was beginning to heave them back. Four young officers of the 41st—Captain Richards, Lieutenant Swabey (already wounded, but refusing to quit the fight), Lieutenant Taylor, and Lieutenant Stirling—all these sprang forward, encouraging their men, and then, calling, they say, upon one another, rushed into the enemy's ranks, and, not being followed by their men, were slain. Colonel Carpenter, the commander of the same regiment, being struck down at a moment when our people were losing ground, remained during some cruel instants in the enemy's hands; and, though presently rescued by the valor of a private soldier named Thomas Beach, he afterward died from his wounds. Amongst those who fell on the side of the Russians was Colonel Bibikoff, an officer of, it seems, high distinction, commanding the four Okhotsk battalions."

"As for Bancroft (a private soldier in the 'Guards'), he had not been quelled; for although he staggered back a few paces when grievously wounded by a second assailant, he still kept his eye on the man, and presently shot him dead. His third assailant he killed by running him through. A fourth and a fifth assailant then set upon Bancroft at the same moment; and, one of them bayoneting him in the right side, he fell; but the next moment he was again on his feet and driving his bayonet through one of the two last assailants. The Russian, thus pierced, fell to the ground, but without being killed or subdued; and by clutching, it seems, at Bancroft's legs, he strove to hamper him in his hand-to-hand struggle with the other assailant. Bancroft—fighting for his life with one upstanding antagonist, and clutched at the same time round his legs by the one who had fallen—could only repress the fierce energy of the man on the ground by stun-

ning him with kicks in the head. Curiously—and one welcomes the sentiment, even if it be wrongly applied—the sight of kicks given to a man on the ground brought out, in the midst of the combat, an Englishman's love of 'fair play;' for, though Ban-croft was but one defending his life against two, Sergeant Alger called out to him, from a spot some way off, and forbade him to 'kick the man that was down.' ”

We might go on quoting scores of such passages, but will close with one describing the field after the Russian columns had definitely withdrawn :

“ The ground here, as elsewhere on Mount Inkerman, was strewn with dead and wounded Russians. From some of these last there came cries and moans which were piteous to hear. Some found means to cry out for 'the hospital,' some for 'water,' some only for pity. Men appealed in their agonies to a common faith, and invoked the name of her who must be dear—so they fondly imagined—to all the Churches of Christ. There was one of these wounded Russians who crawled to the side of Lord Raglan, imploring for a draught of water. Lord Raglan—with his own hand—with his one kindly hand—made haste to raise the man's head, supporting him tenderly in a sitting posture, and asked, whilst he did so, for means to quench the sufferer's thirst ; but he asked in vain. No officer near had a flask which had not been drained. Water, water, a drink of cold water, was more than the chief could grant in this, his hour of victory.”

As the last instance in which Anglo-Saxon troops have been brought into conflict with other European armies, the Crimean war possesses particular interest, none the less because of the wide spread feeling that in the next great continental struggle England may be forced to take an active part, if she would preserve her high place among the nations, somewhat imperiled of late by her long continued neutrality.

Mr. Kinglake's method as a historian is peculiar to himself and is certainly effective. Without the rhetorical brilliancy of Macaulay or the sonorous picturesqueness of Carlyle, his style is admirable for its clearness and vigor, while the singular purity of the English he uses makes his writings a study apart from the mass of information they contain. He may be called the *Messonier* of Historians: the perfection of his details makes the greatness of his work.

NEW BOOKS. .

YOUNG FOLKS' HISTORY OF THE UNITED STATES. By Thomas Wentworth Higginson. Illustrated. Pp. 370. Price \$1.50. Lee & Shepard, Boston, 1875.

One of the encouraging signs of the present time, considered from a political as well as an educational point of view—and surely there is enough of discouragement in both politics and current systems of education to make the least ray of light acceptable—is the number of books recently published for children, and adults who are little more than children in the knowledge they possess of many important things, for the purpose of instruction in the rudiments and elements of literature, science and history, and written or edited by men who stand in the foremost ranks of their several professions; whose intellectual and moral character, at the same time, make their authority unquestionable.

Take Charles Knight's "Half Hours with the Best Authors" as an example in the case of literature; than which we can conceive of no book better calculated to give young people a knowledge of the best literary standards, together with a thirst for further reading. Again, there is the series known as "Science Primers," edited by such men as Huxley, Roscoe, and others of like standing; while, in the sphere of history, we have Mr. Edward A. Freeman's "Historical Course for Schools."

In the same category as the last, though occupying, by the necessity of the case, a much more humble position, is the subject of our present review, by the author of "Atlantic Essays," "Army Life in a Black Regiment," etc. Col. Higginson commences the treatment of his subject thus: "Who were the very first men and women that ever trod the soil of North America? Of what race were they, of what color, of what size? and how did they look? History cannot answer these questions, Science can only say, 'Perhaps we shall find out; but we do not know yet.'"

In the first three chapters we are given all the facts now known, by which attempts may be made to solve the questions thus propounded, including descriptions of the remains of extinct races of beasts and of men, together with the works these have left behind as their monuments—the cave-diggers and the mound-builders—ending with an excellent account of the Indian tribes as they were found by the early European adventurers. The fourth chapter has for its text the old stone mill at Newport, and tells us about the visits of the Northmen; but nearly conclusive reasons are given us for believing that they had nothing to

do with the picturesque old ruin ; it being evidently of colonial origin. Then, five chapters are devoted to the settlement of the country, beginning with the voyages of Columbus, and, after this, are successively described the early colonial period, the French and Indian wars, the Revolution, and so on to the beginning of Grant's administration, the events of which the author justly says are too recent to be described with fairness or sufficient fullness.

All of these periods are set forth distinct from each other, as indeed they were in many respects, while, at the same time, the rise into overshadowing prominence of the slave question through the last half century covered by the narrative is clearly shown ; and the whole book is written with that clearness and grace of style which makes all Col. Higginson's writings so truly enjoyable. The sentence we have quoted above is a good specimen of the spirit of the book throughout ; the author not stopping to give us his theories, nor presenting a garbled and one-sided view, but setting forth the well-ascertained facts of each period with a fairness which leaves no room for cavil.

The only fault the book seems to us to have, is the absence of the civil history of the rebellion ; the chapters treating of that time being almost exclusively occupied with military and naval events.

Following the historical narrative are valuable lists of books, which, in their respective departments of history, biography, fiction and poetry, treat more copiously of the various periods of our history ; the text of the Declaration of Independence, and of the Constitution, with its amendments, is given ; and the book closes with a satisfactory index of the whole.

Altogether, we cannot too strongly commend this "Story of the United States," as the preface calls it, "for young and old."

THE COMMUNISTIC SOCIETIES OF THE UNITED STATES ; from personal visit and observation : including accounts of the Economists, Zoarites, Shakers, the Amana, Oneida, Bethel, Aurora, Icarian, and other existing societies, their religious creeds, social practices, numbers, industries, and present condition. By Charles Nordhoff. With Illustrations. Pp. 439. Royal 8vo. New York : Harper & Bros.

This book connects itself with two series of articles which have already appeared in the pages of this magazine,—those on the history of Communism, and those on the history of the German mystics as American Colonists. In connection with Mr. J. H. Noyes's work on *American Socialisms* and some other and independent sources, it will probably be made the basis of a continu-

ation of the former series, but the present notice is designed to advertise our readers of its contents.

The first thing that strikes us is that Mr. Nordhoff confines himself to "existing societies." These are the merest fraction of the vast host that have at one time or other originated in America, or have been transplanted from the Old World. But the nature of Mr. Nordhoff's treatment of the subject led him to confine his notices to those that still survive. He wished to write picturesque and graphic accounts of what he has actually seen as a traveler to the different centres of communistic interest, and those who have read his previous books of travel, know how competent he is to do this. He is apparently but slightly acquainted with the literature and the history of communism. His introductory chapter is indeed a critical discussion of its theory, but only such as any one who was pretty well read in Political Economy might have written. His reasonings are such as would simply irritate a veteran Fourierite, by their calm indifference to all that has been said on the other side. Mr. Nordhoff gives us valuable contributions to the theory of the subject in his own personal experience of the communists. But he does not himself make any sufficient use of them.

Coming to the book itself, we find that the only communistic societies that still survive in the United States—the moribund Icaria excepted—are such as put themselves on a religious basis; and all that are not of yesterday proscribe the family relation as irreligious and carnal. This is exactly as might have been expected; communism can only perpetuate itself in connection with a masterful religious impulse, and that impulse must be hostile to the family life. In the absence of that impulse it is torn asunder by individualism. In the case of its being friendly to the family life, or even not effectively hostile to it, the family itself will rend it in pieces, because the impulse to crystallize on natural lines is too strong for the theory that would organize men on those that are artificial.

Of the communisms still existing, we might make three groups: (1) Those of German origin, which originated in the great Pietistic revival at the close of the seventeenth century, and were based on a mixture of Lutheran or Reformed Protestantism with the theosophy of Jacob Böhme. Some of these—the Ephrata community for example—came to America at a very early date. Others, after long perpetuating themselves on their native soil, were transplanted hither during the present century, and still perpetuate themselves among us. Such are the Economists or Harmonites near Pittsburg; the *Inspirite* of Amana in Iowa, and the *Separatisten* of Zoar, and the Bethelites. (2) The Shaker group is a survival of the old Philadelphian Society of Behmenists, which was repeatedly reorganized after the death of its founders,

Dr. Pordage and Mrs. Jane Leade. To one of these societies Ann Lee, of Manchester, belonged in early life, and the small fragment of dogmatic teaching in Shakerism is a detritus from Böhme's vast, all-embracing theosophy. Ann Lee organized the society after her arrival in America, and during a period of intense religious excitement. The testimony of her converts shows that they had all been roused to anxiety about their souls by the acrid preaching of the acerb Calvinistic Methodism of the Edwards and Hopkins school, and clung to the absolving authority of the bold, self-confident enthusiast as a drowning man clings to a straw. (3) The Perfectionists of the Oneida and Wallingford communities sprung from a similar revival in 1837 and the following year, of which Finney and Nettleton were the prophets. They solve the sexual problem after a fashion of their own, by restoring the polyandry which some ethnologists regard as the earliest form of the family, but under the restraints of a religious order and mutual criticism.

Mr. Nordhoff depicts all three of these groups in a vigorous, graphic way, using both pen and pencil. His book is eminently readable, if not profound, and will commend itself to a very large class as the best accessible to them.

A NEW MONETARY SYSTEM: The only means of securing the Respective Rights of Labor and Property, and of Protecting the Public from Financial Revulsions. By Edward Kellogg. Revised from his work on "Labor and other Capital," with numerous additions from his manuscripts. Edited by his daughter, Mary Kellogg Putnam. Fifth Edition, to which is prefixed a biographical sketch of the author. Pps. xxvi. 358. 12mo. Price \$1.50. Philadelphia: Published by Henry Carey Baird.

We fear that this elaborate title-page will not be as appetizing to the general reader as it ought. It might have been made very much better, and less in the auctioneer style, and yet more clearly descriptive of the book.

Mr. Kellogg's views, as the title-page itself indicates, have been before the public for some time. They were not elaborated during the present discussion of financial matters and monetary theories. Their author died in 1858.

His opinion was that the existing monetary system gives great advantage to the rich over the poor. The high rate of interest at which money is held, keeps the capable members of society from undertaking the promotion of industry, as they might, could they borrow at a much lower rate. As long as the circulation is confined to gold and silver, and to notes issued by private corporations and redeemable in coin, the price payable for its use must

continue high. But if the government were to step in, to create a vast "safety fund" of credit money, and loan it at, say 1.1 per cent. (eleven *per mille*), on mortgages on real property, the difficulty would be solved for society. The present usurious rates for the use of money would at once cease to be asked; the instrument of association would become both safe and plenty; the natural captains of industry would be furnished with the means of organizing its forces. This, in brief outline, is the new monetary system, which is to do everything for us.

We think that the objections to it are upon the very surface. With a great show of favoring the poorer classes, it is, equally with our present system, open to the charge of being constructed for the "haves," as distinguished from the "have-nots," and thereby widening and deepening the gulf between the two classes. Only those who have real property on which to borrow, are to have any share of the new "safety fund." The much bolder and more radical extension of the credit system so as to take in the working-classes, has been effected by the labor-banks of Germany without any such governmental interference.

Furthermore, it is a principle universally accepted, that if the people are able to do anything for themselves, it is not the business of government to do it for them. Popular enterprise is the motive power that impels the vessel of the industrial state; the function of the ruler is that of the helmsman (*gubernator*) to direct it. In a few instances, such as the post-office, and popular education, and the restriction of foreign competition, the state renders some industrial service to which private enterprise is unequal. But in all such cases the interference of the state is an exceptional fact, and wherever it can avoid direct interference in these matters the avoidance is felt to be right. Now, that the State should step in to make money cheap, can only be justified on the principle that the people cannot furnish it cheaply enough to each other. This we believe to be a false assumption. A natural and thoroughly free system of banking, such as that which grew up in Rhode Island under general laws, is fully able to do all that it is desirable to do. That with every sort of restriction upon the growth of such a system, the rate of money rises, is very true; and this fact involves the rise of just such ultra theories as this of Mr. Kellogg. But such theories, as Emerson says of homœopathy, however excellent as criticisms upon the existing system of things, are very poor pretenses in themselves.

That free banking would soon pull down the rate of interest to eleven *per mille*, we do not believe. Nor do we believe that it ought at once to be pulled down to any such rate. But the industrial growth always has operated to reduce the rate of interest on money, and always will tend to do so. Brutus got fifty per cent. a year; Rothschild has to be content with five. The rate is thirty-

six per cent. in Turkey, which is in the backward state of industrial organization that represents early periods of the world's history; in England, the wealthiest of modern nations, it is sometimes as low as two. If we are to bring it down to the same rate, it must be by slow growth in national wealth and the accumulation of capital. But to bring in that age at once by act of Congress is out of the question.

What we do need is the free concession of power to our whole people in all parts of the country, to supply themselves with money through the agency of their most competent and trusted business men, and under such restrictions as the safety of the community calls for. That, however, would be a thoroughly "new monetary system" in this country.

UNCLE JOHN. A novel. By G. J. Whyte-Melville. New York: Appleton & Co. 1874.

The familiar resource of a husband supposed to be dead by the grace of God, re-appearing to destroy the perfect happiness of a second marriage, is used in this novel with some skill, but in spite of talent, beauty, courage and misfortune, we cannot accept Laura as a woman "nobly planned." She first appears as a chance railway acquaintance of Horace Maxwell, whom she astounds by her familiarity with St. Petersburg, Jeddo, and other "outlandish parts." He next meets her as Miss Blair at the house of Uncle John, where the mysteries begin to develop when he hears a much-traveled man address her as Mrs. Delancey, whereat she grows pale, and begs him to recognize her only as Miss Blair, confiding in Maxwell so far as to allow that she has a secret. This she in time unfolds to the curate Algernon Lexley, who proposes to her. Before accepting him she makes a last and most calculating effort to captivate Maxwell. Failing in which, she makes the curate a most devoted wife, condoning somewhat her earlier career as the wife of an adventurer, using her wonderful musical gifts to betray to him, by a musical scale of his own invention, the cards in his opponent's hand. This accomplishment she practices in Egypt, India, Japan, Australia and South America, and supposing her husband killed by pirates, she returns to her English friends, and has hardly married the curate, when the musical sharper re-appears. After causing much misery, he dies at last of a broken back in gaol ministered to by the *preux chevalier*, Lexley, whose gain, to crack the wind of a familiar phrase, was Delancey's loss.

The heroine proper is Annie Dennison, who takes refuge from her own troubles in an effort to reform one of the lowest districts of London. Those familiar with the discouragements of both helpers and helped, in the most earnest efforts towards reform, will alone understand Mr. Whyte-Melville's flight of fancy in

summing up four months' labor of a London belle. "A drunken man became a rarity; a riotous one an impossibility." Miss Dennison's missionary efforts give rise to as bold a stroke as that of the Sonata accompaniment to whist and *écarté*. She advised some of the men to enlist as sailors under conditions in which they would escape temptation to drink.

"I'd have gone to the ends of the 'arth," he replied, "and so would all of us, if only she'd have come, too, and been made our queen. We offered to sail, three hundred stout chaps, if so be as only she would come along to share the land, and make the laws, and rule over us, right or wrong."

Mr. Melville's courage fails him at this point, and Annie declines the proffered crown in favor of Horace Maxwell as her lord.

Uncle John is a patient, enduring man, who finds that rest in death which in life a wife, whose contentions were a continual "dropping in a very rainy day," denied him.

In spite of many wrestlings with the problems of life through the medium of drawing-room conversations, the book is interesting without having great power. It is to be regretted that these conversations are so full of the technicalities of the field and the turf that they are often not clear to the non-sporting reader.

CHIMES FOR CHILDHOOD. A Collection of Songs for the Little Ones. With Twenty Illustrations by Birket Foster, Millais, and other eminent artists. Pp. 208, 12mo. 75 cents. Boston: Estes & Lauriat.

A very pretty and not too costly collection of the best specimens of that new genus of poetry, which may be said to have originated with Anne and Jane Taylor, although there are a few anticipations of it in previous poets—Watts, Gongora, and some others. As is common in such selections, the editor has not always been governed by the strictest principles of exclusion, for some pieces here given are certainly not "for childhood," as they are quite unintelligible only to maturer minds. Whittier's "New England," Lowell's "The Fountain," Longfellow's "Rain in Summer," Mrs. Osgood's "Labor," Mackay's "The Mountain Torrent," Alice Cary's "One Sweetly Solemn Thought," are of this objectionable class. They are not, like some of the poems in the book, so thoroughly objective as to suit all minds equally. They make demands upon the powers of abstraction to which the child is unequal: for children, while exceedingly imaginative, are also exceedingly matter of fact. They like a story when it is told as the Bible tells it, or as it is told in the poetry of Scott and Macaulay. You can hardly give them too many details, provided you abstain from subjective col-

oring, and let the fact speak for itself. They can follow and realize everything but a sentiment.

With these exceptions, which are by no means numerous, the editor has made an excellent choice for the present volume. We miss indeed a few favorites of this class of poetry, such as that poem by the little Californian girl, "No baby in the house, I know," but every page brings a pleasure of surprise or of memory.

A HUNDRED MINISTERS, AND HOW THEY SWITCHED OFF. Some account of Lights and Shadows of Ministerial Life. Cloth, Pp. 306. Price, \$1.50. Boston: Estes & Lauriat. Philadelphia: Claxton, Remsen & Haffelinger.

It seems hard to believe that the author of this book (who very wisely has not put his name on the title-page) can have persuaded even himself that it would accomplish any good for the cause of religion, or lead men to follow the profession of the ministry. We are quite sure, if he has so persuaded himself, his powers in that direction have reached their limit; and we solemnly warn our good readers, if any of them have seriously contemplated buying a book with such a title as this has, to pause, take our advice, and invest their money more profitably elsewhere. The tone of the book is thoroughly vulgar both in thought and expression, and it has not a trace of vigor to counterbalance this, which is about the worst fault of much of the religious literature of the present day, at least on this side of the Atlantic. Vulgarity, in men and books, if not too loud, can be pardoned when accompanied by a certain amount of strength; but when, as in the subject before us, there is only lengthened *weakness* long drawn out, the combination is rather more than most human nerves can bear.

As an instance of the *animus* of the book,—the author represents one denomination of his fellow Christians to be given over, ministers and people alike, to intoxication. "The Paladums," (whatever that may mean), he says, "are an intemperate people."

ANIMAL MECHANISM; A Treatise on Terrestrial and Aerial Locomotion. By E. J. Marey, Professor of the College of France, and Member of the Academy of Medicine. New York: Appleton & Co., 1874. International Scientific Series, No. XI.

During several months of last year the columns of *Nature* were filled with statements, observations, refutations and corroborations, all brought about by the publication of the views of J. Bell Pettigrew, on the positions of the wing in flying. This author has since published a work on animal locomotion in general (International Scientific Series, No. VIII.). For those unversed in the technicalities of anatomy to properly appreciate the subject which is treated in both of these works, it is desirable to read both.

Dr. Pettigrew adopts the didactic, and Dr. Marey the theoretical and speculative method of treating the subject. The former speaks of the bones and muscles as already existing and provided with the motor, but without considering the relation of their formation to their use. His work is full of "twisting motions of the spine," "figure of eight motions of the legs," "parachute motion," "backward, forward and lateral cycles," etc., but there is no successful attempt to deal with the subject in the only scientific way, viz: by applying exact measurements to their motions, by tracing the evolution of the organs that produce them out of the changing conditions to which the creature which possesses these organs is subjected; by measuring the force of the vital functions in units of heat, and thus pushing forward the structure which may some day bridge over the gap between physiology and physics. Without wishing in the least to undervalue the work which Dr. Pettigrew has done and done so well, we announce our preference for the plan of Dr. Marey, and shall briefly point out wherein we think this merit consists.

In his introduction he very justly suggests a *raison d'être* for the discussion by remarking that of animal mechanism were better understood, an end would be put to many of the foolish attempts on the part of trainers, drill sergeants, etc., to get maximum speed, endurance, etc., under conditions which must forbid success.

The equivalence of the molecular forces, and their transformability into each other, are first illustrated. The calorific forces of most of the alimentary substances are known, and the force or heat which their complete oxidation will cause, can be calculated and verified by experiment.

Next it is shown that animal heat is not different in kind, but only in source from other heat; and that, while all other organs produce heat, the blood circulation and the regulator nerves opening or closing the vessels, give uniformity to the temperature of the body. A diagram of a frog undergoing vivisection will doubtless shock the tender hearted. The myograph is described and used to illustrate the muscular wave. Tetanus, and various kinds of muscular excitations, are ably studied in their connection with electricity. In the following chapters on the relation of size and shape of muscles to the functions they are to perform, the harmony between organ and function, and variability of the skeleton and muscular system, a complete foundation is laid for the practical part of this admirable treatise.

At this point the truly original part of the work begins, and one is compelled to admire the wonderful fecundity of invention, patience in overcoming apparently insurmountable obstacles, and searching review of the indications of the registering apparatus which enables Dr. Marey to lay before us "the extent, kind and

quantity of force displayed by the man, the horse, the bird, and the insect, in all portions of their locomotive apparatus. In Book III., chapter 2, while discussing the trajectory of the wings of insects, it is next to impossible for the author to avoid pointing out certain discrepancies of the facts observed with Dr. Pettigrew's theory; but he does this with much courtesy, and modestly calls it "a divergence of opinion of the English writer from ours," while the diagram of Dr Pettigrew (which he reproduces) clearly shows that the motion of the wing supposed by him is impossible.

The book can be commended to all as one of the best proofs extant that natural history can be made intensely interesting and popular, while remaining thoroughly scientific and exact, when treated by a master.

HALF-HOUR RECREATIONS IN POPULAR SCIENCE. First Series.

Selected and edited by Dana Estes. Boston: Estes & Lauriat.

What Blue Point oysters or a glass of Vermuth are to the gourmand before dinner, such collections of the best popular lectures on science are to the intelligent unscientific public. It is a task which is rather to whet the appetite than to appease it, and for this reason such books as this are invaluable educators. To be sure they have the disadvantage of being misquoted and jumbled-up by the *soi-disant* learned pedant, and referred to in their rhetorical passages as accurate authorities. It is to the hasty perusal of such works by the ill-prepared mind, that we are to trace the ineradicable follies of "Darwin's theory that man was once a monkey," and "Proctor's statement that we were falling into the sun;" "Tyndall's statement that he can explain everything in the universe by force and matter—the theory of atoms;" "the *elevating* of matter," by the same author, "to the same plane as spirit," etc., etc. The origin of all these, and a host of other inconsistencies, are to be traced to such books, which offer a tempting opportunity as well to the artisan to appear wise among his fellows, as to the learned theologian, to save himself hours of unintelligible reading of authorities by culling the thought, as he thinks, equally exactly, but served up in easily digestible form. On the other hand, were it not for such books many a professor of literature would have to acknowledge that he had never read a line from some of the classics of the language, and many a truculent debater of great questions would spell Huxley with a "k." We commend this book heartily to the public as containing some of the ablest treatises on the phenomena of the physical universe which have issued from the brains of modern men of thought and original research.

BOOKS RECEIVED.

Days near Rome. By Augustus J. C. Hare. With illustrations. Two vols. in one, pp. 333 & 363. Price \$3.50. Messrs. Porter & Coates. Philadelphia. Hearts and Hands. A story in sixteen chapters. By Christian Reid. Paper cover. Price 50 cents. Appleton's Library of American Fiction. New York: D. Appleton & Co. Philadelphia: Porter & Coates.

Annual Report of the Secretary of the American Iron and Steel Association, to December 31st, 1874. Presented at the Annual Meeting held at Philadelphia February 11th, 1875.

Alice Brand. A Romance of the Capital. By A. G. Riddle. 12 mo. pp. 384. Price \$1.50. Messrs. Appleton & Co. New York. 1875.

A New Monetary System. The only means of securing the respective rights of labor and property, and of protecting the public from financial revulsion. By Edward Kellogg. Edited by his daughter, Mary Kellogg Putnam. Fifth edition, to which is prefixed a biographical sketch of the author. Price \$1.50 Henry Carey Baird, 406 Walnut Street, Philadelphia.

A reply to the Right Hon. W. E. Gladstone's "Political Expostulation." By the Right Rev. Monsignor Capel, D. D. Reprinted, with additions, from *The Weekly Register*, and *Catholic Standard*, 1875. Messrs. Appleton & Co. New York.

The Doctrines of Descent and Darwinism. By Oscar Schmidt, Professor of the University of Strasburg. The International Scientific Series XV. New York: Messrs. Appleton & Co., Philadelphia: Porter & Coates.

Bulletin de L'Académie Royale, des Sciences Lettres et des Beaux-Arts de Belgique, 43^e Année, 2^e série, tome 38. No. 12, Bruxelles, F. Hayez, Imprimeur de L'Académie Royale, 1874.

Health: A handbook for households and schools. By Edw. Smith, M. D., F. R. S., etc. Popular Science Library. Messrs Appleton & Co., New York, 1875.

THE
PENN MONTHLY.

MAY, 1875.

THE MONTH.

DEATH has relieved the English House of Commons of a duty which might have proved embarrassing, if not difficult. The end of John Mitchel's erratic career seems to have been hastened by the excitements of the last month, which, indeed, proved also too much for a stronger man, his brother-in-law, John Martin. The latter had entered into his kinsman's cause with zeal and energy, and was unable to recover from the shock occasioned by his death. The two were buried within a few days of each other, and were both followed to the grave by great crowds of the people; those who attended Martin's funeral being estimated at twenty thousand. The demonstrations which the Irish in this country have proposed in honor of Mitchel have not been carried out with much success, and it has been very sensibly suggested that the money which processions and flags and badges and music and the like would cost, would be better expended in providing for his aged and invalid widow. Exactly what claim upon the admiration or pride of true Irishmen John Mitchel had, it is not easy for an "alien" to see. He was to all appearances a half-insane enthusiast who did little but damage Irish reputation, and keep alive the unhappy dissensions which all really patriotic Irishmen must deplore. He seems to have had no settled theory of what ought to be done: the end, as well as the means of his political

philosophy, was agitation. In this connection, by the way, a recent letter of Mr. Bright's is interesting. In acknowledging a note and book of the Rev. Mr. O'Malley, Mr. Bright gives his objections to the plans of the Home Rulers with characteristic frankness. He says there may be a million "of that faith" in Ireland—together with "Repealers, Irish Republicans, or other antagonists of Great Britain," "not one-half of whom have any knowledge of political and public affairs" and yet it is proposed to make a "revolution" "not only in Ireland, but also in England, Wales, and Scotland." "In Great Britain," he goes on, "nobody wants two new Parliaments," and the proposition to force twenty millions to do what they don't wish to do in the "hopeless attempt" to allay the discontent of a portion of the people of Ireland, he does not hesitate to pronounce "eminently childish and absurd." Mr. O'Malley has replied at intolerable length, reiterating his argument in favor of a plan of Federation, and expressing tearful regret at Mr. Bright's "narrowness of view," and a sorrowful surprise that "that broad chest" of his is not "the home of a larger and nobler spirit." The "acute readers" upon whose judgment Mr. O'Malley says he "rests with confidence" will hardly see the matter in his light, or doubt the wisdom of Mr. Bright's opinions.

SIR ARTHUR HELPS, the author of "Friends in Council," and the literary friend of Her Majesty, will be sincerely regretted by all lovers of modern English literature. He was a suggestive writer and the master of a pure and idiomatic style, and gave promise—for he was only 52—of many years of literary activity. Sir James Hope Grant, whose death occurred about the same time, is best known as the Commander of the English part of the famous allied army which captured Peking in 1860, plundered the Summer Palace, supplied with gorgeous "loot" the public and private collections of bric-à-brac all Europe over, and won a title for the French Commander, Cousin-Montauban.

AMERICA has earned another title to the gratitude of the English people. Rarely, perhaps, has she contributed more to the excitements of metropolitan life among the lowly than by sending

into London the revivalists Moody and Sankey. One of these gentlemen, it seems, is master of high-pressure oratory of a hundred Talmage or Spurgeon power, and the other of a melodeon and an effective voice. When this last has shaken the multitude of the wicked by the charms of music, soothing and otherwise, (in which he is marvelously assisted by the melodeon) his companion attacks it with all the varied forms of chromatic eloquence, and its demoralization is thus complete. The heart that cannot be softened by the strains of Sankey is sure to be broken into bits by Moody's rhetoric. The breast—no matter how savage—that declines to be penetrated by the eloquence of the one, is certain to be lured into repentance by the former's melodies. Thus, together, they are said to be irresistible. It is, perhaps, questionable, how deeply the impression such revivals make penetrates beneath the surface, how sincere conversions may be which are brought about by such means, and whether experience does not show that the reaction which follows nervous stimulation in religion does not lead to unfortunate results; but, for the time, certainly, this revivalist combination is singularly successful in its drawing power. Tens of thousands come to laugh and remain to pray or sing, and the anxious benches, as they are called in the country, like the supper table at a Philadelphia party (although doubtless of generous dimensions) are crammed and crowded till they groan.

DON CARLOS has met with some severe losses during the past month. The secession of General Cabrera has been followed by that of another general officer, Saballs, and it is said that besides those who have deserted him and joined the Alfonsists, no less than 244 officers, of whom nine are generals, have left his service, and taken refuge in France. Meantime the Alfonsists are quarreling among themselves. Concha, the Captain-General of Cuba, has preferred serious charges against his predecessor Jouvellar, which it is thought will force the latter from the cabinet. Our own relations with Spain have been satisfactorily rearranged by General Cushing. We have receded from the advanced ground recommended by the Attorney General, and Spain will not salute our flag in reparation of an injury done to the *Virginus* while she bore our colors as a mask, but she will pay 80,000 dollars into the

President's hands for the families of the persons who were so hastily executed by Buriel. This settlement will doubtless be entirely satisfactory, and it may perhaps be suspected that there are wives to be found in this country heartless enough to think the price thus paid for husbands not a bit too small.

THERE has been a story that Bismarck was to be made Duke of Lauenberg, but it seems no more than rumor. But indeed the Prince might well be willing to retire to some quieter post than that which he occupies to-day in the forefront of the battle with the Catholics. That struggle continues with increasing fury. The Pope has made a Cardinal of the Arch-Bishop Ledochowski (a reward for which many another would be willing to undergo that person's tribulations), and has sent by telegraph his blessing and approval to the secret meeting of the Bishops at Fulda. (The use of the telegraph, by the way, as a conductor of the Apostolic benediction, is a singular illustration of the progress of the age.) On the other hand no less than 80 ecclesiastics have been imprisoned in Posen, and it is said in a recent dispatch that Bismarck proposes to re-enact the old laws which compelled the clergy of Prussia to communicate with the Pope through the government alone, and secure the passage of others wholly suspending the papal authority until his Holiness is willing to abandon his pretensions to cancel the laws of the kingdom. The arbitrary features of the Prussian Government are not such as our Anglo-Saxon views would approve, and yet it cannot be denied that it has engaged in a struggle in which every resource and every weapon will sooner or later be required. The Vatican is no less to blame for precipitating the conflict—but it is perhaps better for us all that it has come at last.

ANOTHER expedition into Polar regions is about to start. And this time it is neither England, Germany nor America that proposes to swing around the Arctic circle, "sub Jove frigido." A Professor Nordenskjöld expects to sail from Trömsöe by the first of June. The idea of a North-west passage has long been given up and no one undertakes an exploration of this kind, as Franklin or Ross or McClure did, with the expectation of directly benefiting commerce and navigation. But there are, of course, many things

precious to science to be found in the nightless days and dayless nights of the Arctic Zone, and much that may be directly valuable to us all. The discover, too, will soon be a thing of past times for want of unexplored countries, and he who would immortalize his name with Kane's and Baker's and Livingstone's must not delay.

THE busy world which had almost forgotten the tragic episode of Maximilian and Carlotta, was reminded of them the other day by the dedication of a statue of the former at Trieste. It was unveiled by the Emperor, Franz-Josef, in the midst of an enormous assemblage, and with every manifestation of affection and respect. Standing in the city of which he was so liberal a friend, the image of the unfortunate Arch-Duke will call up perpetually his unhappy story, and the bronze face that looks sea-ward and the arm that points towards Miramar—that loveliest of all the royal homes in Europe, which he gave up for the throne, that, in the words of Castelar, “was changed beneath his feet into a scaffold”—teach over again the old story of the vanity of man's ambition.

THE Senate has adjourned after a session spent chiefly in talk, but marked by the debut of several of the new senators. During the debate on the admission of Mr. Pinchback—a question by the way which was abruptly withdrawn by that gentleman's friends, “to be continued in the next” session of the Senate—Mr. Chandler's successor, Judge Christiancy, made a speech noticeable for its brevity and judicial tone. While declaring his belief in the President's innocence of any improper desire to interfere in Louisiana or abuse the powers of his office, and attributing his mistakes to the want of good legal advice, Mr. Christiancy expressed it distinctly as his opinion that the government of Kellogg was not legally established, and could not be made so by mere recognition by the President. To reason that the title of a government, illegally set up by the President, was made good by a subsequent approval by that functionary of his own wrongful action was, said the new senator, to reason in a circle, and he went on, cruelly, to say that the proposition seemed absurd to

every lawyer and jurist in the country—"except the Attorney-General, if that can be said to constitute an exception." The speech attracted considerable attention, and, perhaps, more than it deserved, as the speaker soon afterwards voted with the majority to approve the action of General Grant in recognizing and supporting the government of Kellogg. "Sir," said an enthusiastic jurymen to a lawyer whose eloquence had just secured an acquittal for a client arrested in the commission of a criminal act; "I'd have stayed out all night before I'd have brought him in guilty; but I'll be hanged if I don't believe he did it!" Mr. Wallace, of Pennsylvania, made a speech which was sensible and well received, and Mr. Eaton, of Connecticut, another which was characteristically adapted to swell the Republican vote among his constituents as much as possible. There are many "gifted orators" in both parties now-a-days who excel in this species of boomerang eloquence. But the speech of the special session was undoubtedly Andrew Johnson's. Those who predicted that the rule, which we are informed by a high authority, prevails with regard to the skin of the Ethiopian and the spots of the leopard, would be found applicable to Mr. Johnson's oratory, were fully justified by the result. His talk had been so sensible during the few days which followed his arrival in Washington that many thought him changed by experience and made wise by adversity. Once on his legs in the Senate and under weigh, he was, however, himself again, and while there were sharp, and true, and even able things to be found in the speech, they are the few kernels in the bushel of chaff. The effect was logical. No excitement followed the report of Mr. Johnson's going off, and before the smoke had cleared away, those sensitive straws of public opinion, the reporters, had ceased to blow from his direction. The Hawaiian treaty, slightly modified, passed the Senate by a majority which astonished even its friends. Let us hope that Mr. David A. Wells may prove to have been mistaken in his view of it. There is, however, a very weighty objection to the principle of Reciprocity Treaties, to which public attention has not sufficiently been called. A reciprocity treaty is an alteration of our customs legislation by one branch of Congress (the Senate) without the concurrence of the other, and is, therefore, in strictness, an invasion of the rights of the House. Besides this, our treaties with other powers,

such as France, promising them all the favors shown to the most favored nations, make such treaties as this last "risky," to say the least.

A CURIOUS commentary on the political theories of the Administration is found in the recent appointments to office of defeated congressmen. A defeated member of the dominant party who had led a gallant fight against odds in a doubtful or desperate district, has undoubtedly a claim upon the general party consideration. He deserves sympathy and in times past has often received office. But the remark may be ventured that never before has it been thought proper to single out for the spoils of power, the men who have been repudiated by their constituents for good cause, and generally by the honest voters of their own party. The former kind of appointment strengthens a party and encourages the rank and file. Nothing surely demoralizes the best classes in a political organization more than the latter. Nearly all the new appointees have been rejected in Republican districts and for a share in the back Salary Grab. A few are known beyond their own districts: the majority are lights of the tallow dip variety—shedding at best but a mild effulgence and doomed to have gone out unnoticed but for this expiring "splutter." All of them, it is quite unnecessary to remark, voted for the Force Bill and carried it against the votes of thirty odd of the leaders of the party. The sturdiness with which the Republican party seems to maintain its front in spite of such blunders as have filled up the history of the last few years, is evidence enough of the hold it had upon the country and of the life of usefulness it might have enjoyed. A man of sound political sense and broad political views in the Presidential chair, from '68 to '76, might have bequeathed to his party a lease of power for a generation. But no man or party can safely disregard the lessons of experience or set public opinion at defiance, no matter how great the prestige of either may have been or the services of both.

The American camel is a patient animal, tolerant of burdens to an extraordinary degree, but an obstinate piling up, although of the lightest, will inevitably break even his back at the last.

THE one good nomination failed to be confirmed. Mr. Pardee seems to have been well fitted for the post of Judge of the District Court at New Orleans, but the Senate failed to confirm his nomination, chiefly, it is said, on the theory that that place belonged to a Mr. West, who represents Governor Kellogg "in part" upon the Senate floor. Great inconvenience will be the result in New Orleans. The docket of the court is crowded with cases clamoring for trial, but no judge can be appointed until December. Suitors will therefore lay in large stores of patience.

THE appointment by the Pope of an American Cardinal has occurred during the month. In some quarters there is naturally a consequent uneasiness. Eyes that have detected in Mr. Schurz an instrument of the Jesuits, must see with prophetic ken far into the future, and can doubtless discern danger ahead for civil and religious liberty in America, from this event. But to the ordinary vision it is a handsome compliment paid to an estimable and worthy man, which really concerns no one but himself and his friends and fellow Catholics, and has no more political significance than the defeat of Dr. De Koven, or the election of Dr. Jagger.

GOLD has been found in the Black Hills, and as a natural result we learn that steps are to be taken "to extinguish" the Indian title to the country. A party of unfortunate Sioux are on their way to Washington, to negotiate (it is said) for its sale for a million of dollars. The policy of the Department, a reporter says, and there is no just reason to doubt the accuracy of his report, will be, however, to buy the land for a much less sum and open it at once for settlement, the red man "to remain, subject to certain well defined restrictions." None of these last, doubtless, will apply to the furnishing of supplies.

OUR relations with Mexico, or rather with the miserable Mexicans who live on the southern bank of the Rio Grande, are becoming threatening. Numbers of these people have crossed the river and have been pillaging the Texans' homes. Gov. Coke has called for assistance, and General Sheridan has returned to the dangers of New Orleans, this time, however, to look after real banditti, it is said. What the President will do, he has himself

said to a reporter he does not yet know; and his recent experience of calls upon his sympathy and assistance will doubtless make him wait to learn the facts before acting. That he will issue a proclamation and declare the Mexican robbers to be banditti, or brigands, or contraband of war, or something of that kind, and then leave the rest to General Sheridan, cannot confidently be expected. Nor will he pronounce them turbulent and disorderly persons and bid them disperse, as he did less than a year ago the friends of Mr. Postmaster Brooks of Little Rock. He will probably "wait for all the facts, and act accordingly," for so say those fountains of knowledge, the public journals. In the meantime an expedition gotten up by the accomplished statesman who heads the Committee of Foreign Relations in the Senate, started on a journey of pleasure to Mexico. The fear of yellow fever has, however, stopped it at New Orleans, and it has been abandoned. This is a pity; for "one really learns a great deal about geography and foreign lands by travel"—as a young gentleman once remarked to an acquaintance—"and things look very differently when you see them from what they do on the map." There is no knowing what the effect of this proposed journey might not have been upon the Senate Committee on Foreign Relations, and the loss by its abandonment can hardly be exaggerated. But for the present there seems to be no remedy.

THE fight against the Canal Ring, in New York, has been fairly opened, and with every prospect of success on the part of the people. The message of Governor Tilden was a bombshell in the Assembly, and since the anti-Tammany days of 1871, there has been nothing like the excitement which his action has aroused. The long career of success, the extended political power, and the immunity which the canal ring men have enjoyed, had not prepared them for so vigorous an attack as is being made upon them; and while they put on a bold front, they begin at the very outset to strike out "wildly." The ingenuity with which their plans have been formed and carried out is the only creditable thing about them. Well directed, it ought to have won them fame and fortune honestly. They have apparently reduced the system of bidding for contracts, and arranging for work under contracts, to a scientific system of the most exquisite kind. Compared with

their perfect skill, Tweed's handiwork looks rough. Beside such masters as they are shown to be, our rulers in Philadelphia are but journeymen. Of course the action of the Governor has been ascribed to Presidential aspirations, and this is said to be only a move in a well considered game. If this be true—if a desire to be President leads a man to do as Mr. Tilden did first in 1871, and is doing now to-day—the people of the United States should earnestly pray that such a "mania" may seize upon more of their public men, and for all our sakes seek to inoculate their old and new stock of statesmen with the "Presidential fire."

THE Administration has received another blow in Connecticut. The government of Mr. Ingersoll has been so excellent, and his own character stands so high, that he was an exceptionally strong candidate. On the other hand, Mr. Greene was personally very popular in his end of the state, and against him personally no charge could be made. Hawley and Hubbard among the Republican, and Phelps and Foster among the Democratic candidates for Congress, were as good nominations as could be desired, and thus the honors were easy at the start. The Democrats were severely burdened with the weight of Mr. Eaton, whose foolish speeches were calculated to arouse the war spirit of their opponents and drive back into the Republican ranks many an almost persuaded bolter. But the Republicans after all carried a heavier weight. Mr. Greene's Grantism is of the advanced type. His approval of the Louisiana policy is of the "the President and all of us" variety, and he signaled his enthusiastic delight when that policy was partially endorsed by Congress by firing off a hundred guns.

The fight was thus fairly and squarely a "third term" fight. The question was made directly the issue of the canvass, and by the Republicans themselves, in spite of the lessons of November, in spite of the New Hampshire experience. Gen. Hawley, it is true, was supposed at first to be lukewarm, and Mr. Hubbard was known to be disloyal, and Mr. Blaine, who went into the contest at the last moment and made two speeches, sought earnestly to put the struggle on the best ground for his party, and arouse in men's minds the question whether they could trust the Democratic party with power in national affairs after their past expe-

rience. The attempt was, however, vain; and on the issue the Republicans are badly beaten. Ingersoll remains Governor by a large majority, and three Democrats are returned to Congress. The defeat of ex-Senator Foster is to be regretted, for he is the kind of man we need in public affairs to-day, and Mr. Starkweather is the kind of whom we have too much. And Gen. Hawley will prove a real loss to the House of Representatives. He is a man of character, ability and courage, and one for whom all parties feel and express respect. He had a glorious opportunity this winter to seize the leadership of the best wing of the party, and he rose almost up to it. But like many another, he went only far enough to arouse the suspicions and lose the support of the administration, and not far enough to win and hold the confidence of its opponents; and between the two wings he has stood in this contest almost alone. The Democrats fought him with vigor, and the regular forces of his own party defended him without spirit; and though he made an earnest fight, as was characteristic of the man, he seemed conscious of his position, and rose too often to explain. "*Qui s'excuse s'accuse,*" in such times as these with an administration like the present and a people growing daily more independent and disposed to scratch, and Gen. Hawley, like many another good man and true, has fallen between two stools to the ground. There he must remain for a time at least. Had he won a victory, or even been defeated as the champion of the better aspirations of our political life, he might have been a very prominent figure within the next twelve months. But such opportunities come not often, and never twice to the same person. The mass of men moves ever onward, and leadership, like time and tide, waits for no man.

NATIONAL EDUCATION.—IV.

(3) **I**N the Centennial Exposition we are about to solicit a comparison of results as to the third branch of Industrial Education. We are to display the results of our training of our workmen in all sorts of skilled manufactures and intelligent work, and to put these results alongside the productions of other peoples

and climes, and to bid them see the outcome of a hundred years of popular freedom and popular development in the arts of peace. We are about to bid the peoples of the earth to the centennial birthday of a nation whose history has been untrammled and its growth unchecked by inherited privileges—a nation which started with the national slate wiped

“Clean for the ciphering of some nobler fate”—

a nation which has always recognized its vocation to be the converting the things that are elsewhere the privileges of the few into the birthright of all. And we are about to say to them that this grand process has characterized our work as well as our politics, and has results to show in either sphere. We have had a national industrial life, as well as a national political life, and these are its fruits.

That such is the meaning of such exhibitions, that they are substantially the comparison of the results of industrial education and most powerful stimulants of its progress, the history of the great European displays of this sort sufficiently shows us. The first in history, that of 1851 in London, was a grand exhibition of the industrial greatness of England in the department of iron and some other of the larger departments of manufacture. In that comparison all the Continental nations were fully distanced. Germany and Belgium had begun to protect their iron manufactures by restrictive duties only six years before, and the attention of their people to their importance was hardly yet aroused. England first, France a bad second, the rest nowhere, might be the fair summing up. But in the departments of light and graceful manufactures—those whose products approach artistic excellence—the Continental producers were far ahead of their insular rival. Her glass and delf wares in particular were ugly, ungraceful lumps of wasted material, which would not for an instant sustain comparison with the graceful work produced by German and French workmen, whose artistic education had made them fit to do work that demanded brain as well as hands—invention of new forms, as well as the reproduction of those that are traditional. The old “willow pattern” china—the senseless imitation of the preposterous pictures in which Chinese artists depicted the rough “course of true love” among the Celestials—was, all at once, seen to be ridiculous, and a new and vigorous impulse was instantly

given to the art training of English workmen. Within a few years the number of persons learning drawing and designing was multiplied by thousands, and the series of measures which culminated in the establishment of the South Kensington Museum, was begun by the British government. In 1861 and 1867 the displays of English work in this department, it was confessed by all, showed an incomparable advance, and England was no longer ashamed of her artistic manufactures.

On the other hand her display of metallic wares in 1851 had roused an equal ambition of some of the Continental peoples, and the determination to equal or surpass her here was formed by her three rivals. The most thorough technical training was provided for their workmen in technological schools, especially with a view to the production of those wares whose values depended chiefly upon the workmanship expended, and not on the raw material, much of which latter they were at that time accustomed to import from England. The consequence was that in the exhibitions of 1857 and 1861, and still more in that of 1867, England was completely distanced, not only relatively to the evidence of progress achieved, but even absolutely as to the excellence of the work itself. England had nothing new of this sort to show that would even compare with the display of labor-saving machinery from America, and in 1867 Westphalian iron men outdid her in the very sort of articles in which she had supposed no Continental nation could compete with her. Even by 1861 the conclusion was reached that before England courted any more comparisons of the sort she must do great things for the education of her workmen, and 1867 found her still further in the rear, and nearly everybody agreed with Prof. Tyndall that "in virtue of the better education provided by continental nations England must one day, and that no distant one, find herself outstripped by those nations both in the arts of peace and war." We hear of no regrets that there was not the opportunity to hold another exhibition in London in 1871; indeed the *Saturday Review* kindly tells us that England is *blasé* on this score—has made as much out of that sort of thing as there was in it, and does not want to see any more. That excellent authority, as everybody knows, takes for its motto the *Vanitas vanitatum, et omnia vanitas* of Ecclesiastes. It might in this instance add *et afflictio spiritus*.

But Hon. W. E. Forster, whose recent visit to America, and still more recent rejection by the Liberal party as the candidate for Mr. Gladstone's place, will be remembered, has made a speech to the wool manufacturers of Bradford, in which he exhorts them to carry the American people by storm in favor of free trade, by such a display of their goods, with specification of retail prices, as shall convince the American "consumer" that his advantage lies in buying abroad instead of at home. If he can thereby convince the thinking part of the American people that their interest is only in the cheapness of what they buy, and not in the relation of its price to what they have to sell—that it is a wiser national economy of labor to leave it idle than to employ it, and that it is on the way to industrial greatness when it keeps its farms on one continent and its workshops on another—then he will achieve more by priced sample cards than has yet been achieved by more ambitious forms of literature. But in truth the comparison will not be simply between any two nations, but between each nation and all the rest of the world; and we fear that in many respects both England and America will be outdone by nations whose industrial growth is a thing of yesterday. The Continental peoples, every one of whom has carried on its development as a manufacturing community under the protection of discriminating tariffs, and who have consistently accompanied that policy with its natural complement—the technical education of their workmen—may possibly put to shame both the nations who have left one or both to the hazards of competition and self-interest.

For indeed the technical education of the manufacturing class for their place in the industrial state is as much neglected in this country as any public duty well can be. That we are not absolutely destitute of educated workmen, capable of better things than using the mere skill of hand that is acquired in the workshop, is chiefly due to the large immigration of foreign artizans, attracted to our country by the superior advantages which their class enjoy among us. We have been in workshops where hundreds of skilled workmen were employed, and where not a single man outside the office could claim English as his native language. Whole branches of manufacture are carried on entirely by foreign artizans. Thus the manufacture of silver and plated ware, which has become quite an industry, especially in New England, during

the last decade, is carried on by foreign workmen, as Americans with the requisite artistic feeling and skill of hand are simply not to be had. And in other cases, where the work carried on in our establishments is patterned after artistic designs, these designs are almost if not quite always imported from Europe. We believe that the silk manufacturers of Connecticut are striving to make their industry an honorable exception to the rule in this respect, and with considerable success.

Now this state of things is especially humiliating to us as Protectionists. It is true that Protection is sometimes defended as a means to enable us to import foreign workmen and feed them at home, instead of importing their work and feeding them abroad, and paying the cost of carriage on both food and work. But it is also, and with still greater force, urged as a measure of national education in the methods of industries not yet acclimatized at home. As such it has the sanction of many of the great lights of the Passivity or Free Trade school, such as Rossi, Blanqui, Chevalier and John Stuart Mill. When adopted on such grounds, it implies as a correlative, active measures for the technical education of our manufacturing classes, the school supplementing the workshop.

Now this training, again, should begin in the public schools of our great cities. The "neighborhood knowledge" proposed to be taught in them should include the great industries that are carried on in their own vicinities. They should learn the sources of the raw materials used, and the countries from which they are drawn. They should know as much as can be told them of the scientific principles associated with the changes that those materials undergo, with something of the mechanics of the machinery used and the methods of its construction. They might also be taught not only the status of these industries, but their history in the past, the story of the great improvements made at different eras, and the great inventors who made them. Whatever would excite in them an intelligent interest in the industrial operations going on around them, and would lead them to keep their eyes open on the employments of active life, should be included; whatever also would lead them to regard those employments not merely as drudgeries to earn a living, but as vocations that occupy an honorable place in the great scheme of human activity, and are

venerable with hoary antiquity, as well as associated with the great laws and principles of physical science. We profess to believe in the dignity of labor, but our belief confesses its own barrenness in its failure to clothe itself in any words but a few hackneyed phrases. Dead beliefs are easily so distinguished from those that are living. It might be worth our while to see whether there are not words by which we might convey to the young mind some sense of that dignity, by showing the relation, not of labor in general, but of its specific local forms, to the largest spheres of human interest, national, historical and scientific, and thus put into their hearts some conception that would prevent work from becoming in their hands a mere wearisome drudgery.

Drawing should of course be taught to all the scholars in our public schools, and special provision should be made for those who exhibit capacity for the art. Everybody can learn to draw, but a minority of the scholars in our schools possess a real feeling for form and color, and a power of artistic reproduction, which are among the most valuable of gifts in an industrial community. Both from our own recollections of school-boy associates and from what we have been told by intelligent teachers of our schools at present, we know that such boys are to be found everywhere, but their talent finds little outlet, much less cultivation, in most of the schools, and becomes in fact the torment of the teacher, from the abnormal direction it takes. They are like Fra Lippo Lippi in his monastery school—

I drew men's faces on my copy books,
Scrawled them within the antiphony's marge,
Joined legs and arms to the tall music-notes,
Found nose and eyes and chin for A's and B's,
And made a string of pictures of the world
Betwixt the ins and outs of verb and noun,
On the wall, the bench, the door.

That our own schools have at least begun a movement in the right direction, by introducing the teaching of drawing, is one of the best signs of the times. But such a step is but a beginning, and the public, while it cordially acquiesces in what has been done, cannot be said to be fully awake to what ought to be done, in the full cultivation of all the artistic talent that lies dormant in the community. The very school-room, by its construction and its ornamentation, as Mr. Ruskin tells us, should contribute to

this end,—to the cultivation of the feeling for form and color in the young. No better and worthier use than this could be found for the artistic power that already exists in the community. A thoughtful artist, who has a sense of the high nature of his vocation, would feel—we think—that his power could be employed for no nobler end than in this humanization of the children, and this consequent elevation of the social and industrial life of the people. The picture that hangs on the rich man's wall, or even is exposed to the critical gaze of connoisseurs and sight-seers on the walls of a public gallery, appears after all to be a great waste of one of the highest forms of power, as compared with the same picture hanging day after day in the sight of the young, moulding by its unconscious influences a multitude of minds still in the formative stage.

But the public school, after all, can only make a beginning. Learning and working should go together in the life of the working classes, as they have gone together in the life of the world,—the former lifting the latter out of its sordidness, and the latter keeping the former from being fantastic, unreal, devoid of vitality. Now in our modern view of the matter we invariably think of education as confined to the period of youth, and as especially appropriate for immature minds. But that conception of the matter is very modern ; it can hardly be said to have much antedated the Protestant Reformation. The great ancient and mediæval schools were designed for grown men. What the young learnt was the merest introduction to the studies of the full-grown man. Not till the time of the Brethren of the Common Lot was the education of children made a subject of special attention, and the first general and national movement in this direction began with Luther in Germany. His appeal to the burgher class of Germany “that they set up good schools for the young” in which “good histories and poets” should be taught, are among the most characteristic of his popular treatises. The great stress laid by Protestantism in general upon the popular use of the Bible, and especially by the Calvinistic Protestants upon the importance of a correct apprehension of religious doctrine, was a mighty help in this direction. Knox stands next to Luther as the founder of popular schools for the children, and to the Kirk chiefly Scotland owes that wonderful diffusion of popular intelligence, which has

so thoroughly transformed that once unenlightened, impoverished and quarrelsome people. But the Jesuits took this as well as a good many other leaves out of the Protestant book. Whatever the merits or defects of their educational system, no body ever surpassed them in the clear perception of the fact that the future was in the hands of those who could mould the minds of the rising generation.

We are in danger, however, through this new drift of things, of forgetting that there is nothing inconsistent with earnest and productive study, in the habits and pursuits of mature years. No man has a right to relax his efforts at mental progress, because he has passed the age at which men are released from the discipline of the school. He may be a very busy man, but learning and working are not inconsistent with each other. By a little economy of time, a little perseverance and application, the most notable results have been achieved by those who were thoroughly busy men. Sir John Lubbock, as everybody knows, is a banker; the two Mills were employés of the East India Company; a considerable amount of the most careful and valuable work in various departments of British local natural history, has been achieved by men who are shopkeepers, tradesmen and stone-masons.

And on the successful combination of learning and working in what are called "the working classes," depends very much of the industrial growth of the world in general, and of each industrial state in particular. In this century the sciences and the arts are wedded in practice as never before. The union of the two dates properly from the establishment of the Continental System by Napoleon, which aimed to make Europe industrially independent of England and her colonies, and of all those foreign countries from whose productions the English fleet had shut out the continent. His policy forced the most stupendous series of practical problems upon the infant science of chemistry, and it solved them with an energy such as showed it to be an infant Hercules. Up to that date the discoveries and new applications of the industrial world had rather furnished new problems for the scientist than sprung from his investigations; from this time science begins to take the initiative, and to suggest to industry methods and appliances which improve and simplify all industrial

processes.* Every progressive and intelligent people is vying with every other, and their success must in the long run depend upon the quality of the work—upon the intelligence of the workman, and his superiority to his rival in the same line.

* See Charles Gouraud's *Historie de la Politique Commerciale de la France* (Paris, 1854), *Tome Seconde*, pp. 136 et la suite. M. Gouraud says: "Shut in by blockade on all sides, France had no choice but to demand of the genius of her children that they should accomplish wonders, that she might make shift simply to do without the rest of the world. The British Cabinet at first found plenty of amusement in the strange proposal and purpose that our manufacturers were to create machines that should rival those of England, and still more in watching our *savans* search for European products which should replace the wares and raw materials of America and Asia. But the laughing stopped, when it was seen by the test of facts what men like Berthollet, Vauquelin Fourcroy, Conté, Chaptal, Thénard, Parmentier, Brogniart, Darcet, Adam Leblanc, Philippe de Girard, Oberkampf, Richard Lenoir, Gonin, Clément and Désormes, Deyeux, Barrall—were capable of achieving in this direction under the impulse of the great genius who aroused them to activity. *Non omnia fert omnis tellus*—'No one country bears all sorts of fruits,' they had gravely told us, and the *Laissez faire et laissez passer* school echoed the sentiment. It is a mistake. There is one country which is capable, when fertilized by labor, of producing everything, and that is the human intellect!" After abundant details of new inventions of industrial apparatus, M. Gouraud proceeds: "The greater part of this progress was due to the science of mechanics; but another science took part in the work likewise, and accomplished still rarer wonders. This was that entirely modern science, whose principles Lavoisier had just found time to fix before he fell by the axe of the Revolution—Chemistry. Napoleon divined what a brilliant future there was in store for industry in its association with this new science, and he one day remarked, with his characteristic vividness and originality of language, that he was going to muster in the chemists. They all appreciated the situation, some even before he appealed to them. In an instant France was covered with laboratories, where the first intellects of the nation were searching for the solution of the singular problem—to find on the soil of France substitutes for the products of the East and West Indies. There was, when they were first seen at work, a shower of jests, all in bad enough taste, and that not only on the banks of the Thames, but, what was worse, even on those of the Seine. They were inexhaustible. Get on without indigo, cochineal, Adrianople red, English white lead—above all, cane sugar—impossible! Nay, when the first samples of the marvelous new products, which our chemists had invented, came on the market, they were first suspected of being fraudulent, and were then overwhelmed with raillery." But the French chemists succeeded, revolutionized the art of dyeing, of metallurgy, and many other arts, and almost reversed the maxim of their critics and mockers, making it read *Omnis fert omnia tellus*.

The complexity of modern manufacturing, like all complexity in practical life, requires this intelligence. The resources of the old workshop were limited in kind as in extent; things were utterly impossible to it, which are every-day matters in the factory which has superseded it, and has replaced its irregular, shiftless methods by the regularity of clock-work, the precision of mathematics, and the careful distribution of all functions. The old workman plodded on in a traditional routine, which called for little more than a slight cultivation of hand and eye.

But the modern workman needs a technical education that goes down to the why of his work; he cannot, without that, be prepared for the emergencies that are incident to every complex organization. Much of his skill can only be acquired, indeed, at the work-bench, and can only be thorough when obtained there. But he will be the better and more thorough workman in the proportion in which he has learnt the science as well as the art of his occupation. Especially he will be the more able foreman—a position to which every workman should be looking forward—when he has mastered the scientific principles which govern the operations of which he has taken the oversight. In either position his work will be done all the better because he has an intelligent interest in it; he will be saved from that “work without thought” which is now known to be the commonest road to insanity.

Education, both general and technical, is needed to make the working classes more mobile and adaptable to new methods. In almost every department of manufacturing industry, great and sudden changes of method take place; old processes and appliances are rejected, and new substituted sometimes with great rapidity. There stands, for instance, in this city, a sugar refinery full of idle machinery, not far from new, which its proprietors cannot afford to use, and much of which they will eventually sell for old iron; and this is not the only refinery in America thus thrown out of use. A Scotchman has discovered a way of making considerably more sugar out of a gallon of molasses than was heretofore possible; and as the old machinery cannot be adapted to the new process, it is thrown idle. Similar changes in the manufacturing of candles, in a case known to the writer, threw a

nearly new apparatus out of use, and caused heavy loss to its owners. Now apart from the serious questions thus raised for the capitalist, the transfer of our workmen from one occupation to another must be nearly impossible, unless their intelligence be such as to enable the transfer. Workmen of a low order of capacity, with only the aptitude of hand and of eye that have been acquired at the work-bench, will suffer the more from these changes of method, through lack of adaptability.

We have already indicated the importance of this technical education in the case of those workmen who are engaged in producing articles which require beauty of form, of color, or of design for their perfection, and in which the toil of the artisan is wedded to the joy of the artist. Our age lays every day more and more stress upon the beautiful; it is continually awakening to a more human feeling for it. It is hardly forty years since this feeling began to awaken in the English and American people; the change was part of a great intellectual and moral revolution which began about the third decade of this century, and which has made politics, literature and church life fresher and less technical. What is called the Oxford movement in the Church of England is but one of the many phases which this change assumed. The new love of music, the enunciation of new principles in art, the slow acceptance of higher maxims in policy, the grave concern for the well-being of the millions, and the profounder appreciation of the significance and value of history, are all signs of the revolution in which we live.

The new love of beauty has not yet become democratic. We still look upon the beautiful as a luxury, as something for the rich rather than the poor, something to put into a costly picture, or a vase of precious materials, and put up for a gazing stock, rather than as the right and fitting accompaniment of the common utensils and appliances of household life. We have a superstition that the grace of the Gothic arch becomes a church only, or some rich man's house, which is "as grand as a church." But all such notions are the survivals of a past age, which is not yet wholly past—an age which cared much for use and substance, but little for beauty and grace. There is no real antithesis between the two things; as Cardinal Wiseman well reminds us, the elegantly shaped earthenware from Greek and Roman kitchens with which

we fill our museums and adorn our mantle-pieces, served their every-day uses of holding salt, oil or the like, just as well as do the ugly pieces of delf that take their places; and they cost no more for being beautiful. We have not had common things around us made in beautiful shapes, because we have not cared enough about beauty to make the effort—because till recently our minds have been dormant on the whole subject; and the new revolution has not yet worked its way down to our daily life. But our democracy is at last passing out of the Ther-sites stage, into that of Pericles, and we have good reason to expect a grand era of the fine and industrial arts, which have always lived their grandest life when in alliance with each other and with freedom. And as ours is, more than any past, the industrial age, the natural direction of the new artistic development will be to the elevation of industry and the beautifying of its products. The manufactures that aim at artistic excellence may fairly be expected to make great advances upon anything known in the past, and to bring the finest combinations of form and color within the reach of all who can compass even the necessaries of life. To this end, as Cardinal Wiseman says, the artisan must once more become the artist; and that through the development of the working classes themselves to assume this position. For all art, worthy of the name, has in every nation been born in the workshop, and in such workshops as were also studios; while it has been pampered, corrupted and finally destroyed in the palaces of nobles and kings.

What England has been doing in this direction has been pointed out; what Germany and France have done does not admit of brief description. We may reserve our brevity for the description of what has been done in the United States. In 1851, we, of all civilized and industrial communities represented in the London Exposition, competed with England for the place at the bottom of the list, as regards the application of art to manufacture. By 1867 England had won her way to one of the highest places, but we hugged the distinction of inferiority as tenaciously as ever. With us artistic culture is still the privilege of the few, while our industrial rivals are striving to make it the birthright of the many. We are fairly beaten, therefore, in that which is our peculiar vocation as a nation—the turning such privileges into such birthrights.

Hence a large part of our work, though equally costly in material and excellent in ordinary workmanship, takes rank below the corresponding work of Europe, and the fashion of preferring foreign to domestic wares perpetuates itself, and is one of the obstacles to our achieving industrial independence. Were such articles designed and made at home with as great an expenditure of artistic skill as abroad, and by American workmen, their superior adaptation to American tastes would speedily secure them the market. So much is seen from the great success of those articles in whose manufacture a worthy endeavor has been made to effect this, and indeed, the whole history of commerce illustrates this. The adaptation of home-made wares to home tastes, and the popular preference for them when other things are equal, form a part of that natural protection by which Providence fosters home industry. And the efforts of English manufacturers to overcome it have been unwearyed, and often successful. An English dry-goods firm sent instructions to its agents in China to pick up well-dressed Chinamen of different classes on the streets, and buy their clothes off their backs to send at once to England as specimens of the class of goods that the Chinese wanted. In the same way models of all the traditional costumes of the peasants of Europe have been secured and imitated in England. This procedure is only possible where national tastes are unprogressive and the fashions are stereotyped. It would be impossible where a distinctive national taste existed in a progressive and intelligent community, and was fostered by a national school of industrial art. In such cases the line of movement could not be foreseen by the foreign producer with sufficient certainty, nor effectively controlled by him. The human material for such a school really exists among this "practical" people, and in this unpicturesque country. A very considerable amount of native aptitude for art exists among us, and finds no sufficient outlet, because we have no sufficient system to winnow out the really gifted children of our schools and carry forward their training. As yet this work of art education is everybody's business, and is therefore generally nobody's. When we have learnt a little better, and are able to see a little farther, a school of ornamental art native to the soil will become possible, and will produce work of far more value to us than any that we can import from abroad. For it will be the outgrowth of the

national spirit, and will therefore react the more powerfully upon the national mind, in imparting pleasure and instruction, in producing refinement and elevating thought—just as Rodgers's statuettes have done more for us than Thorwaldsen's Apostles could.

Students of the great building eras of the past—men of such different mental character as Ruskin and Ferguson—tell us that this matter of the education of the workingman is of the first importance in its bearing on architecture. They tell us that the Greek temples and the Gothic cathedrals were produced by artisans who were also artists—who worked with heart and head as well as with the hand, while they hewed the goodly stones of those great buildings. And they say that since the workingman was reduced to the mere copyist of a design produced in the brain of an architect, instead of being himself an architect, there has been no true architecture—none that deserves to take rank as a work of art—none, therefore, that has any claim to permanence, or is likely to attain it. They say that this unhappy distinction between the two classes must be in great measure removed, and the artisan must again become an artist, as his brethren, the stone masons of Greece and the Middle Ages were.

Only the high authority of these writers gives us courage to make such statements. If they are true, then they are surely of the greatest importance to a young country like the United States, which is putting vast sums into public and private buildings every year, and expects these to last for centuries. They derive some force from what we see every day going on around us, in the destruction of buildings which, fifty or a hundred years ago, were counted handsome, but have become very eyesores through the dissemination of a finer taste on the subject. We know already that nothing is so costly or so wasteful as ugly architecture. A mechanical and lifeless copy or half-copy of a Doric temple, or an Italian palace, or a still uglier, more barn-like building, may please the generation that sees it built. But it carries the sentence of death within itself. The human mind wages ceaseless war on ugliness, detecting it by instinct in spite of the sophistry of its eulogists, becoming more sensitive to it with every advance in culture, and finally abolishing it as an eyesore and a nuisance. All work that is not the best of its kind comes into collision with

this subtle, leveling force, which is stronger than mortar and brick, or stone and cement.

On the grounds of judgment accessible to us, we incline to impute the weakness of our architecture and its artificiality—as Ruskin and Ferguson do—to the defective training of the workman and his undue subordination, and to look, as they do, upon the spread of better ideas among our architects as an insufficient corrective, so long as this great gulf remains between the two classes. And after all, this is only an extreme case of the general problem of the fit education of the working classes, for the same principles are applicable, more or less directly, in every other department. Artistic beauty is the crown and the flower of all the productive work of man, and to make the artisan an artist, to add the joy of beauty to the severity of toil, is a problem that meets us on every side of industrial life. Only this will lift the life of the workman out of its sordidness and wearisomeness, and make it tolerable by making it noble.

ROBT. ELLIS THOMPSON.

WINGED QUADRUPEDS.



Fig. 1. *Lasiurus cinereus*—the Hoary Bat.

THREE of the four elements anciently supposed to make up the world are peopled with forms of animal life—air, earth and water are enlivened with the presence of organized beings, denied to fire alone. Fire is simply a mode of motion of material particles, too energetic to be compatible with the slower combustion of like particles which is essential to life: “salamanders” endure no higher heat than that of the imagination. Air may rightfully claim all animals, since it is required or used by all in greater or less quantity; but, viewed simply as a medium in which

animals may move, this claim must be surrendered in favor of a fair division with the earth and water, in the possession of animal life. In the endless diversity of Nature's vitalized evolutions, there are beings specially fitted for activity upon the earth, in the water, and through the air.

The most complex, specialized, and therefore highest development attained as yet by organized matter, is witnessed in the *Vertebrata*—one of the major groups of the animal kingdom, embracing all animals which have a back-bone. The Vertebrates are divided into several classes (according to the nicest distinctions established by recent zoölogists), four of which are universally recognized: I refer of course to mammals, birds, reptiles, and fishes. The third of these groups acknowledges no bounds: reptiles pervade the three elements. In past time monstrous Pterodactyles—the prototypes of mythological dragons—traversed the air by means of huge leathery wings; and to this day some reptiles fly by means of a parachute-like expansion of the body. Others live in the water, swimming like fishes; yet others run or spring upon the land, or creep prone upon the ground, or climb upon the trees that mantle the earth's surface. But mammals, birds, and fishes, have each their allotted scene of action, in one of the three elements. There are beasts of the field, birds of the air, and fishes of the sea.

Nevertheless, the exceptions by which Nature proves these rules are not singular. There are fishes that leave their natural element to hover through long flights, sustained by means of wing-like fins; there are other fishes that forsake the water for awhile to scramble on land and even climb trees. Some birds go down among the fishes for their food, never fly, and scarcely manage to crawl a little way on land; others—wingless to all purposes, and unable to swim withal—are confined in their movements to the earth. A large group of mammals—the cetaceans—go down the deep, transformed into fish-like shapes, associates of fishes in their own element, as their names also used to be in works of natural history. These are of cumbrous form, and often unwieldy size; naked, without hind limbs, with tail and fore-limbs like fins, and often toothless jaws. Others exhibit the reverse modification, in adaptation to aërial locomotion. Various kinds of quadrupeds are fitted for progression through the air, to a limited extent, and after a

certain fashion. They protract long leaps, gliding down an inclined plane, by means like those employed by the flying reptiles of the present epoch, though they are incapable of long sustained, true flight. Such are the *Galeopithecida*, or "Flying Lemurs," as they are called, though they are not Lemurs at all, but a family of the order *Insectivora*. A more familiar illustration of this same kind of imperfect flight is seen in the case of our well-known flying squirrel, *Sciuropterus volucella*, which belongs to the order *Rodentia*. Representatives of two entirely different orders are thus merely modified in essentially the same way, for one special purpose. We must carefully distinguish this superficial and comparatively slight modification, imposed alike upon two different groups of mammals, from those profound structural changes which are required to convert a quadruped into a flying animal. It is all the difference between a parachute and a pair of wings. One particular group of quadrupeds is perfectly organized for flight by means of wings; and the consequent modifications of structure are sufficiently pronounced to constitute an order—the order *Chiroptera*. The only truly winged quadrupeds, or flying mammalia, are the bats.

The time when it might be doubted whether a bat was "a bird or an insect," passed when the Cetaceans were reclaimed from among the fishes, and the class *Mammalia* was finally established. Like all other mammalia, bats suckle their young; like most of them, they are covered with hair, have true socketed teeth of special structure, and in all respects agree perfectly in mammalian essentials. The wings are an after-thought, so to speak; yet they are such a peculiar equipment that decided changes of various parts were necessary in order to fit them on. It is in the sum of these changes, plus the wings themselves, that the order *Chiroptera* subsists. Naturalists stumbled over the bats for a long while in their attempts at classification. Linnæus, the father of much zoölogy still current, placed them next to man and monkeys, mainly because they agree in having one pair of mammæ, situated on the breast. They have been associated with the *Insectivora*, which include such animals as moles and shrews, on account of their numerous small teeth. But the fact is, they constitute an order apart, the proper position of which in the Mammalian scale may be readily indicated.

Mammals are separable into three great primary groups: *Ornithodelphia*, *Didelphia* and *Monodelphia*—mainly according to the mode in which the reproductive process is carried out, and upon the character of the organs by which this function is performed. The first and second of these groups are very poorly represented at the present time, and confined to limited portions of the earth's surface; the last embraces the great majority of existing mammals, inhabiting all the earth, excepting the uttermost polar regions, and exhibiting, under minor modifications, an ordinary course of reproduction and an ordinary character of the organs concerned. These monodelphs again occur under two conditions of cerebral development. In the higher series, which includes, besides man and monkeys, the cetaceans, the hoofed quadrupeds, carnivorous animals, and some others, the cerebrum or thinking part of the brain is highly developed, its mass being great enough to overlap or entirely cover the other portions; and there are, moreover, certain specialties of intimate structure. In the other series a different proportion subsists between the cerebral and other parts of the brain. The former series is called *Educabilia*, from the high capacity for development of mental faculties which its members display. The latter is named *Ineducabilia*, from its lower general average of intelligence. It consists of the *Chiroptera*, or Bats, which are its highest manifestation; of the allied *Insectivora*, a large group already mentioned; of the *Rodentia*, the largest and one of the most varied orders of Mammalia, and of the *Bruta*, a rather small group of highly diversified mammals, containing the sloths, armadillos, and ant-eaters.

Bats, therefore, are about midway in the Mammalian scale, being the highest one of the lower series of orders. They may be characterized, in brief, as ineducable monodelphs, with the forelimbs adapted for flight by the great elongation and wide separation of most of the joints, between which is stretched an ample membrane, connecting also with the hind limbs, and continuous with another membrane, between the hind limbs, which includes most or all of the tail; with the teeth of three kinds, incisive, canine and molar; and with one pair of pectoral mammæ. These are the prominent technical characters by which any Bat may be distinguished from all other mammals. Bats have another specialty of different kind: they are the only completely cos-

mopolitan mammals—not that all Bats are found everywhere, but that some representatives of the order exist in all parts of the world, excepting, as already hinted, the polar extremes, where no mammalian life is supported. It is well known that particular forms of animal and vegetable life are not scattered broadcast upon the earth's surface, but that each species, and for the most part each higher group, has its own limits assigned; and this limitation is as much an attribute as any point of size and shape or color can be. Zoölogists have mapped the land areas of earth upon considerations deduced from the study of the distribution of animals. It is interesting to learn, in this connection, that a considerable portion of the globe,—namely, certain islands of the Pacific,—is untenanted by land mammals, excepting Bats alone. The universal diffusion of the *Chiroptera* is probably explained by their unusual powers of locomotion, to which watery tracts of moderate extent offer no obstacle. The like extensive dispersion of the marine mammals may be similarly accounted for.

Before noticing any particular kinds of Bats, it may be interesting to examine the wing as a whole, and to see what other modifications combine to the exceptional result—a winged quadruped. The idea of a wing which is gathered from its most familiar exhibition, in the bird, would be largely faulty in its application to a bat's wing. Both agree in being supported upon a similar framework, namely, the bones of the fore-limb; but there the resemblance ends. In the bird, everything tends to consolidate and bind together the bones of the limb, and to taper them off at the end, by reduction in bulk or total suppression of the terminal joints; the expansive surface for action upon the air results from feathers, which are hair of highly developed and complex structure. In the Bat, the corresponding expansion consists of the skin itself, which is stretched across the enormously lengthened and widely separated bones of the hands and fingers. This style of wing is unique in the present order of nature. Pterodactyles had a similar arrangement, though the membrane was supported mainly upon one immensely enlarged finger. The flying lizard of our times, *Draco volans*, has bony rods supporting its "wings;" but these come from the back-bone, not from the fore-limb, and are more like the ribs of an umbrella than anything else. In the flying opossums, flying lemurs, and flying squirrels, the para-

chute is merely a "slack" of skin along the sides of the body, with little or no special bony support, expanding mechanically when the limbs are stretched out. If we attentively examine a bat's wing, we may note the following arrangement of the parts; From the shoulder-blade (*a*) a long slender bone pushes out along the fore-border; this is the humerus, or upper arm-bone (*b*): the angle it makes with the succeeding and still longer bone corresponds to

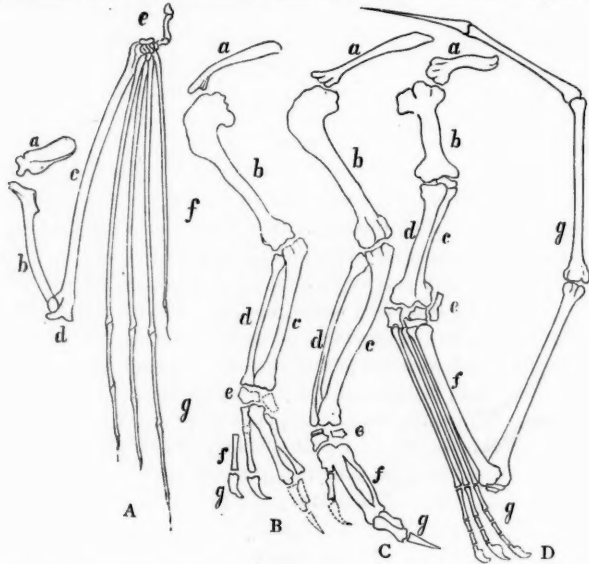


Fig. 2. Bones of the wing of several Flying Vertebrates. A. The Bat; B. The Mesozoic Bird, *Archeopteryx Lithographica*; C. The ordinary Bird; D. The Pterodactyle. (The references to the individual bones are the same for each, as explained in the text.)

our elbow. The succeeding rod, longer than the first, and apparently single, consists of two bones consolidated, the ulna (*c*) and radius (*d*); it represents our forearm. This segment ends with a salient forward angle, the wrist; it consists of six minute bones, not visible from the outside (*e*). This is surmounted by a short thumb, ending in a sharp little hook, in which resides the only power of grasping left to this singularly modified limb. All the bones beyond this point are those of hand (*f*) and fingers (*g*);

they are seen as slender-jointed rods radiating across the further part of the membrane from front to rear—two of them, by their approximation, increasing the stability of the fore-edge of the wing, the other two widely divaricating. From the end of the fourth finger (of the fifth finger if the thumb be counted, as it should be), the membrane stretches away to the foot. This is only less curious than the hand. We note its extremely small size—not half an inch long, in a species where the fingers measure three or four inches in length—and observe how curiously it is twisted around, so that the toes point backward. The toes are five in number, each ending in a small, sharp claw: the animal reposes hanging head downward by these hooks. Between the hind legs a membrane

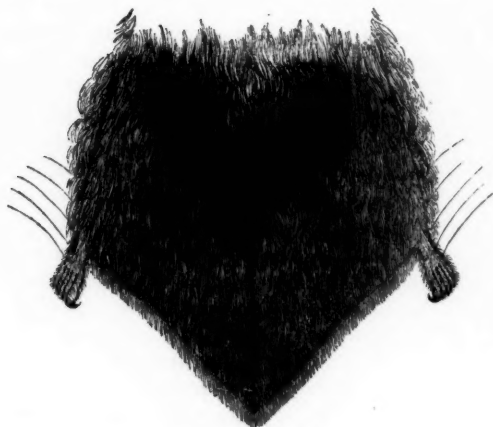


Fig. 3. Hind limbs and hairy interfemoral membrane of Common Red Bat (*Lasiurus noveboracensis*). The lines stretching outward indicate the wing membranes. (Nat. size.)

stretches across, embedding the tail; and from each heel a small bony spur projects along the border of the web, increasing its strength.¹

¹The reader is presumed to observe one of our small United States species—but the arrangement is essentially the same in all, however it may differ in minor details.

Sometimes the interfemoral membrane, as that which stretches between the hind legs is called, is naked like the wing membrane; in other cases it is furry, like the body. Patches of fur, or furry extensions from the body, may cover some portions of the alar membrane itself. When naked, the whole membrane, which surrounds the animal from the shoulder, across the tips of the fingers, and past the heel, to the end of the tail, is seen to be a thin, smooth, tough, elastic and semi-transparent tissue, the surface of which shows lattice-work of numberless lines crossing and recrossing. These lines of impression denote elastic fibres embedded between the layers of which the membranes consists, serving to shrivel the membrane when the wings are folded. The membrane is moreover permeated with innumerable minute blood-vessels and nerves—in fact, it is a highly sensitive nervous tissue, endowed, as we shall see in the sequel, with extraordinary powers as an organ of touch.

Modifications in other parts of the body, to fit it for aerial locomotion, should not be overlooked. The whole skeleton is remarkable for its lightness and slenderness: all the bones together of the common Brown Bat weigh but ten or twelve grains. The breast-bone is large and strong, as the basis of action of the powerful muscles—the *pectorales*—which move the wings. The collar-bones are large, serving to keep the shoulders well apart; the shoulder-blades are expansive, for the attachment of their proper muscles. The back-bone is a slender column; the pelvis and

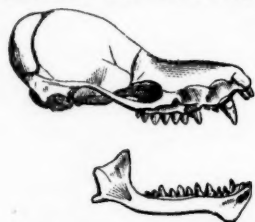


Fig. 4. Skull of Brown Bat (*Vesperugo subulatus*). Enlarged.

hinder limbs are comparatively small and weak. The skull, on the contrary, is rather large and massive. There is a complete dentelure of thirty to thirty-eight teeth, of three kinds. The digestive system, in the insectivorous Bats, which constitute the bulk of the order, is simple, the intestine being short—less than twice the length of the body—and often lacking a coecum. The nervous system is highly developed, the sense of touch and hearing, in particular, being brought to an exquisite state of perfection. The ears are large and

complex, not only within, where the sense of hearing resides, but also in the outer parts, especially in the insectivorous species. Besides the ordinary conch or auricle, there is a special development of a part, rudimentary in most animals, called the *tragus*—a membranestanding upright in the hollow of the ear. The function of this peculiar growth can be only surmised; it may act as a valve to guard against entrance of foreign substances, or to prevent a volume of sound gathered by the large auricle from impinging too forcibly upon the parts within, as one author has said; or, again, it may have an opposite effect, since it partially converts the auricle into a funnel-shaped orifice, like the mouth of a speaking-trumpet, serving to catch and convey into the ear sounds too faint to be gathered by the auricle alone.



Figs. 5, 6. Ears of two different kinds of Bats, showing the *tragus*. Enlarged.

Before leaving the subject of sense organs, I must not fail to allude to the singular appendages of the snout of many Bats, which are called on this account "Leaf-nosed" and "Horse-shoe." These are a curious outgrowth of the skin, simple and leaf-like, or pleated in a complicated manner. It is reasonably surmised that these structures have no connection with the olfactory sense, since they are separate from the lining membrane of the nasal cavities: they are more probably organs of touch. The tactile sense, however, is believed to reside chiefly in the wing membranes, the sensitiveness of which is so great that conditions of the air which impinge upon them during flight are felt with sufficient distinctness to enable the animals to avoid unseen obstacles. This is considered to have been established by the famous experiment of Spallanzani, who found that a bat with its eyes put out readily shunned such slight obstacles as silken threads stretched in its way. But since thousands of nervous papillæ have been shown by another distinguished anatomist in the skin of a mouse's ear, it may be reasonably inquired how much of this exquisite sense—a sense that feels objects through the medium of air without actual contact, and is in this like hearing—really resides in the ear, with

its expansive delicately-membranous auricle, and with its tragus attached like one prong of a tuning-fork.

The nose-leaf just mentioned brings up a matter not to be longer delayed: the classification of the Bats, in which this organ plays a part. Precisely as we found the position of the order among the Mammalia, may the position of the families and genera within the order be determined according to nature. Bats are readily separable into two sub-orders, according to the nature of the food, and corresponding modifications impressed upon the structure. One of these is a small group (in number of species) confined to certain parts of the Old World. The species composing it, very improperly called "*Flying Foxes*," are frugivorous, and present many peculiarities of external and internal form. All the remaining species, widely distributed over the earth, are flesh-eaters—they feed upon insects and other small animals. Among these carnivorous Bats three groups of lesser value by one



Fig. 7. A leaf-nosed Bat (*Macrotus* sp.) Nat. Size

grade are found. The famous Vampyres of South America, stories of whose blood-sucking propensity, however widely exaggerated, have a basis of fact, constitute one small group, appropriately called *Hematophila*, or lovers of blood. The Bats with nasal appendages constitute a second group of the same grade; they are named *Histiophora*, or standard-bearers. The remainder of the carnivorous series, without such excrescences, are collectively distinguished as *Gymnorhina*, or Naked-nosed Bats. The blood-lovers are represented by a single family; the other two groups contain each several families, not necessarily to be enumerated here. The Naked-nosed Bats are the most generalized type, most widely distributed; and they are represented most numerous in species. With the exception of a single species of Leaf-nosed Bat, found on our southern border, all the United States species belong to the *Gymnorhina*.

Notwithstanding the diligence with which the Bats have been studied of late years, resulting in a fair knowledge of their struc-

ture and relationship, very much remains to be learned of their vital economy. As every one knows, they are nocturnal and crepuscular creatures, passing the daytime sequestered in nooks and crannies about buildings, in caves and fissures of rocks, and in hollow trees. In favorite resorts they sometimes gather by thousands, to issue forth in streams in the dusk to forage for their insect food. They are not wholly inactive during the day, though this is their period of repose; for in places where they most abound, their scratching and squeaking is incessantly heard. They rest by clinging to some support with the hooks of the hands, or suspend themselves head downward by the claws of the hind feet. We are all familiar with their rapid, flickering and perfectly noiseless flight; the power of instantaneously arresting or changing the direction of their course is required for the capture of their minute and active prey. Bats walk but little; encumbered with wings, the gait is slow and apparently toilsome—a clumsy creeping, in the strongest contrast to the lightness, ease and grace of their movements on the wing. Contrary to a prevalent impression, bats flying at night are not attracted towards a light. They very frequently enter our apartments on warm summer evenings when the windows are left open; but this is either pure accident, or their heedlessness in the pursuit of winged insects that seek the light.

The Bats which inhabit North America have of late been investigated by Professor Harrison Allen, of Philadelphia, to whose able memoir we owe much of the precision lately gained in our knowledge of the interesting group—one difficult to study on account of the secluded and in fact veiled habits of the species which compose it. Dr. Allen's monograph opens with some general remarks, a part of which may be appropriately transcribed in the present connection:

"Among the numerous agents which Nature employs for restricting the excessive increase of the insect world, the Bats hold a conspicuous position. Eminently adapted to an animal regimen, the vast majority of these animals are exclusively insectivorous. Mosquitoes, gnats, moths, and even the heavily-mailed nocturnal *Coleoptera*, fall victims in large numbers to their voracious appetites. . . . In this respect they hold a decided relationship to certain birds, and it is interesting to observe how, under different

circumstances, these widely separated animals serve to the same end. The functions which the latter perform during the day, the former assume in the evening. The latter prey upon the diurnal insects, while the former feed exclusively upon the crepuscular and nocturnal kinds. The disappearance of the birds of day is a signal for the advent of the dusky host, which, as it were, temporarily relieve from duty their more brilliant rivals in guarding the interests of Nature. But, while thus connected with birds in their position in the world's economy, bats have none of that grace of form, or beauty of coloring, so characteristic of the others. Their bodies are clumsy and repulsive; their hues are dull and unattractive—nor can the eye dwell with pleasure upon their grotesque and awkward motions. This aversion is heightened by the associations of the time and place of their daily appearance. Attendant as they are upon the quiet hours of twilight, when the thickening gloom is conducive to the development of superstitious feelings, bats have always been associated with ideas of the horrible and the unknown. In olden times, when the imagination of the people exceeded the accuracy of their observations, it was one of the numerous monsters inhabiting their caverns and forests. It has done service in many a legend; its bite was fatal; it was the emblem of haunted houses; its wings bore up the dragon slain by St. George. It is easy to trace from this early impression the permanent position of the bat, as an emblem of the repulsive, held in letters and arts. It is mentioned in the book of Leviticus as one of the unclean things. Its image is rudely carved upon the tombs of the ancient Egyptians. The Greeks consecrated it to Prosperine. It is part of the infernal potion of the witches in Macbeth, while Ariel employs it in his erratic flights. In art, its wings have entered largely into the creation of those composite horrors, evil spirits; nor have modern artists escaped from the absurdity of encumbering the Satan of Holy Writ with like appendages. To this fancy of the ancients of placing the wings of a bat upon the demons is happily opposed the sweet conceit of the poets in adorning the figures of angels and cherubim with the wings of birds. The wing of a bat is somber and angular; that of a bird is of delicate hues and replete with curves. It is therefore poetic justice' to have the one become

an emblem of the infernal, as the other is the expression of a heavenly form."

If visible organs of flight must be affixed to the impersonations of disembodied spirits, neither the justice nor the taste of such special selections may be denied. But is not the gross materialism equally barbarous and inartistic in both cases? The presence of four anterior limbs has no realization in nature; the conception is a figment of the imagination, like the Chimæra and Hydra, and the figurative expression of such monstrosity is necessarily inartistic. The offense against good taste would be far less, were the limbs represented as transformed into wings. But why this material form at all, in rendering an ideal? The appeal to the æsthetic sense would be far stronger and more perfect, were spirits both of upper and nether regions to fly by unseen and incomprehensible agency, instead of adopting the visible material means employed by lower animals—particularly since the spirits must, it seems, retain one pair of limbs for the embrace, in malice or in benevolence, of mortals.



Fig. 8. Great-eared Bat, (*Plecotus macrotis*). Nat. Size.

NOTE.—The illustrations of this article are taken with permission from Dr. Allen's memoir, above cited.—Ed.

E. COUES, M. D.

THE ANCIENT CITY.¹

The purpose of M. de Coulanges is to explain certain peculiar, and, to modern students of ancient history, obscure features of the social, jural, and political institutions of the Greeks and Romans. In order to do this he finds it necessary to carry the inquiry back as far as possible in the history of these institutions, and to examine them with the best light which can be obtained in the successive stages of their growth; for they are not the establishment of any one age, but are the product of a long series of ages, at every point in which the past has served as a model after which the present has been fashioned. M. de Coulanges, therefore, begins his labors with a study of prehistoric times. Collecting such scattered indicia as are afforded by the study of language, of old religious rites, and fragments of ancient law, he has attempted to thread the course of history back to a remote period, without assignable date, when there were as yet neither Greeks nor Romans but only Aryans, and to reconstruct, as a basis for his subsequent work, the most ancient form of Aryan society, to ascertain the principle of its organization and the nature and import of its simple customs.

The conclusions to which this examination has led M. de Coulanges are quite new in many respects, and in some important points at variance with views which are now generally accepted by students of primitive culture. It is, therefore, of this portion of his work that we wish particularly to speak. We must first, however, remark parenthetically, that, after the true French manner, he has ignored completely the existence of any collaborators in this field of inquiry, and has, in this sense, made it entirely his own. No one would surmise from a perusal of his pages that Roman history had received any attention since the days of Montesquieu—who, if we remember rightly, is the only modern writer to whom he has alluded by name—much less that the more comprehensive subject of primitive culture had lately been taken up by such men as

¹The Ancient City: a study on the Religion, Laws, and Institutions of Greece and Rome. By Fustel de Coulanges. Translated from the latest French edition by Willard Small. Post 8vo. Pp. 529. Price, \$2.50. 1875. Boston: Lee & Shepard; Philadelphia: Claxton, Remsen & Haffelfinger.

Klemm, Tylor, Lubbock, and McLennan. This complete isolation of the work before us will mar its interest for the greater number of readers, who would be glad to meet occasionally with some evidence that its author is at least acquainted with the views of others who have gone over the same ground, even if he finds reason to dissent from them.

The earliest social organization, in the opinion not only of M. de Coulanges, but of students of primitive times generally, was the family: primitive government was patriarchal. That such a state of society primarily existed within the Semitic race, is known on the authority of the Hebrew Scriptures; and that it also existed anciently within the Aryan race, is rendered hardly less certain by a comparison of the Aryan languages, which reveals the fact that terms of a domestic import belong usually to the oldest stock of words—that, in particular, the series of names, *father, mother, brother, sister*, runs with only an occasional break through the entire group. What was the bond which held this little community together, what was the principle of its organization? In the opinion of M. de Coulanges it was an ancient belief. The primitive Aryan family was a religious organization. The tie which bound together each little association, and kept it distinct from all other similar associations, was not so much natural affection among its members as it was a community of religious rites. The religion of the primitive family, however, differed essentially from that of later times when men offered sacrifice in temples to Jupiter, Juno, and Apollo. It was older than this religion, which comparative mythology has shown to have sprung from an original worship of the powers of nature; it was entirely a domestic worship; none but members of the same family could take part in it; the father, as head of the family, was its priest, and its gods were simply deceased ancestors.

A picture of the ancient family, in the routine of its ordinary life, is thus sketched by M. de Coulanges:

“If we transport ourselves in thought to those ancient generations of men, we find in each house an altar, and around this altar the family assembled. The family meets every morning to address its first prayers to the sacred fire, and in the evening to invoke it for the last time. In the course of the day the members are once more assembled near the fire for the meal, of which they

partake piously after prayer and libation. In all these religious acts, hymns, which their fathers have handed down, are sung in common by the family.

"Outside the house, near at hand, in a neighboring field, there is a tomb—the second home of this family. There several generations of ancestors repose together; death has not separated them. They remain grouped in this second existence, and continue to form an indissoluble family.

"Between the living and the dead part of the family there is only this distance of a few steps which separates the house from the tomb. On certain days, which are determined for each one by his domestic religion, the living assemble near their ancestors; they offer them the funeral meal, pour out milk and wine to them, lay out cakes and fruits, or burn the flesh of a victim to them. In exchange for these offerings they ask protection; they call these ancestors their gods, and ask them to render the fields fertile, the house prosperous and their hearts virtuous."

This religion of the tomb M. de Coulanges regards as probably more ancient in its origin, certainly more potent over the conduct of the early Aryans, than that religion which had for its objects of adoration the sun, the heavens, the winds, etc., and he conceives it to have been the natural outgrowth of the first crude notions of a future life. There are no indications of a time when the Aryans did not believe in the immortality of the soul. But the earliest idea of an existence after death was very different from what it became in subsequent ages. The most ancient generations had no conception of a distinct realm of the dead, a region remote from earth, either a Hades or a Heaven; nor was the doctrine of metempsychosis the primitive belief even of the Aryans of the East. In early times it was believed that in the second existence the soul remained associated with the body; born together, they were not separated by death, and were buried together in the same tomb. All the funeral rites of the ancients attest this belief. The practice of depositing offerings in the grave—food, clothing and utensils—is unintelligible unless we assume that the friends of the dead man believed that he still lived under the ground, and had need of these things. The funeral repasts, which on stated occasions were celebrated at the tomb, are additional evidence of the belief that a living being rested

there. This ceremony was most scrupulously performed by the ancients, and continued unchanged down to the time of Virgil and Ovid, who have left us a description of it as it was still practiced in their day. According to these writers, the tomb was surrounded with wreaths of grasses and flowers, and cakes, fruits, and flowers were placed upon it; milk, wine, and sometimes the blood of a victim, were added. This custom was something more than an act of commemoration, or a mere tribute of respect to the dead. It was, at least in the earliest times, a solemn ceremony, upon the due performance of which depended the repose and happiness of the occupants of the tomb. A spirit that received duly the offering of food and milk, or wine, was a contented spirit, and acted as a benevolent and protecting divinity in the family; this was the Roman *lar*. A spirit that through neglect was deprived of the required nourishment became a *larva*, a malignant demon. Unable itself to rest, it vented its spite in inflicting evils upon the living. This was the belief; hence the paramount importance attached by the ancients to the regular performance of the ceremonies of the tomb.

This primitive religion had nearly disappeared in the historical times of Greece and Rome, and had been subordinated to a new faith which adored celestial gods, but not until it had stamped its ineffaceable mark upon the whole constitution of society. One of the most stringent requirements of the worship of ancestors was, that the ceremony should be performed by a member of the family. The *manes* could not receive food from a stranger's hands. Even the presence of a stranger disturbed the rites, and hence he was always religiously excluded from the ceremony. The perpetuation of the family became therefore a most solemn obligation. A man who neglected to raise children periled not only his own future happiness but that of a long line of ancestors, since he left the worship of the tomb unprovided for. This consideration will explain the stringent laws which existed in several of the Greek and Roman states against celibacy. It also affords a complete solution of the prevalence among the Greeks and Romans of the custom of adoption, since an expedient must very early have been sought to meet those cases where a failure to raise a son threatened the extinction of the family worship. M. de Coulanges believes, furthermore, that the marriage ceremonial—at least that most solemn and

binding form of marriage known among the Romans as *confarreatio*—was of the nature of an initiation, by which the bride, having formally renounced the worship of her own family, was inducted into that of the husband. We have not space, however, to follow him in this discussion, nor to show how he interprets by means of this same family worship other distinctive features of the Greek and Roman bodies politic—such as the idea of property in land, the laws of inheritance, the absolute power of the father over all the members of his household. Much less can we attempt to outline his theory of the mode of growth of “the ancient city,”—to show how the family enlarged to the *gens*, and the *gens* to the *tribe*; and how out of a union of the *tribes* arose the state. In order to understand how the theory of this gradual evolution is made to account for the institutions under study, one must read the book itself; and we will add that it is a book which will repay reading carefully, although we apprehend few readers will be able at every point to give unqualified assent to its author's views.

But since he has laid unusual stress upon the worship of the *manes*, has in fact based upon it his entire system of ancient history, we shall inquire a moment whether he has not exaggerated the importance of this worship. No one has overlooked the fact that among the ancients, as among tribes low in culture at the present day, there were practiced certain rites of sepulture which constituted in some sort a worship of the dead, but M. de Coulanges has been the first to elevate this religion to a place of the first rank as the faith of faiths in primitive times.

The first consideration which must cast distrust upon his conclusions respecting the character of primitive religion is, that he has restricted his inquiries to a too narrow field. Rites of sepulture, of one kind or another, are or have been practiced universally; the belief in the existence of spirits is likewise universal, and so, too, is a belief in the divinity of certain natural objects, especially the sun and moon, while all barbarous nations have a mythology which is based, as is now fully proved, upon a worship of the mysterious powers of nature. Any one who would discover the character of primitive religion, who would learn how the religious sentiment became developed, should study all these data carefully. But M. de Coulanges not only has not done this, but he has not even taken under his survey the whole Aryan race. He

has confined himself to three branches only—the Greek, Roman, and Hindu. Again, the reader cannot fail to be struck with the fact that all his illustrations of the character of ancestor-worship among the Hindus are extracted from the Laws of Manu, a very old work, no doubt, still not the oldest exponent of the Aryan religion. The Rig-Veda is universally admitted to be older than the so-called Laws of Manu, and the picture of Aryan religion presented by the Rig-Veda is quite different from that painted by M. de Coulanges. The worship is, it is true, a domestic worship, but it is in no sense a ceremonial of the tomb. Its gods are not the spirits of dead forefathers, but they are easily recognized personifications of natural objects. *Agni* (*ignis*), fire, holds a conspicuous place; *Indra*, the highest god, was apparently a personification of the heavens, although the meaning of the name is not clear. Less prominent than these are *Varuna* (*οὐρανός*), the god of night; *Vayu*, the wind; *Surya*, the sun; *Soma*, the moon, and so on to the end of the list. It was to these gods that the Aryans of the Vedic times sang hymns, and offered prayers for health, long life, riches, or victory over their enemies.

It is true M. de Coulanges does not deny that this worship was very old. "We can easily believe," he says, "that the first rudiments of this religion are very ancient, though not so old, perhaps, as the worship of ancestors. But as it corresponds with more general and higher conceptions, it required more time to become fixed into a precise doctrine." If he means by this that it took a long time for the Aryan to arrive at the conception of personal celestial deities, such as dwelt on Olympus, and a still longer time to reach the higher generalization of a single divine power, such as we find it in ancient philosophy, we agree with him; but we are at loss to understand with what high conception the adoration of natural objects corresponds. The very essence of this worship was that men could form no conception of what these objects were. They perceived that the sun dispelled the darkness of night, and reawakened life upon the earth, and therefore they adored the sun—as a god, if we will, but to them it was only a mysterious, an incomprehensible thing. They perceived that the tempest spread devastation around them, and therefore they trembled before it, and sought to bribe it with gifts to do them no harm. Such objects were not deities to the

primitive man, in the sense which we attach to the word, but their contemplation impressed him deeply with the truth that he was not himself the lord of the universe.

If this religion has not an equal antiquity, and was not equally potent anciently with the worship of the dead, M. de Coulanges should explain the prominence which is given to it in the Vedas, and this he has not attempted to do.

But the most telling fact against his theory can be taken from his own pages. By the side of the funeral ceremonial in the ancient family he observes the cult of the sacred fire. It therefore becomes necessary for him in the support of his theory to connect these two worships together; and the manner in which he has done this betrays a *gaucherie* which is little indicative of profound philosophical acumen.

"In the house of every Greek and Roman," he tells us, "was an altar; on this altar there had always to be a small quantity of ashes, and a few lighted coals. It was a sacred obligation for the master of every house to keep this fire up night and day. Woe to the house where it was extinguished. Every evening they covered the coals with ashes to prevent them from being entirely consumed. In the morning the first care was to revive this fire with a few twigs. The fire ceased to glow upon the altar only when the entire family had perished; an extinguished hearth, an extinguished family, were synonymous expressions among the ancients."

He adds, "It is evident that this usage of keeping fire always upon an altar was connected with an ancient belief." We should not have put this so. Say, rather—it is evident that this usage was a very ancient one. This is all that need be said of it. Without doubt, the custom of keeping a fire burning continually on an altar had become among the Greeks, Romans and Hindus a religious observance; so it had among the Mexicans and Peruvians. But it by no means follows that it was such from the first, and that its origin is to be traced to any recondite principle of religion. In these days of lucifer matches it is a very simple matter to obtain fire whenever occasion may require. It was only a little more difficult in the days of the tinder-box and flint. But as we go back towards primitive times we find the means employed for obtaining this necessary element more rude

and laborious, and the inducement greater to take especial care that a fire once lighted shall not go out. Herrera tells us of the natives of Hayti that, whenever they traveled to any great distance, they always carried with them lighted firebrands, which they were careful to keep aglow by occasionally blowing upon them, and similar expedients for preserving fire are to be observed among all rude tribes. When we note such facts as these and reflect, further, that fire is one of the natural objects which have universally been "deified," it is surely not difficult to understand how its worship should finally have assumed the shape in which we discover it among the more cultured nations of antiquity. But the simple explanation here indicated does not suit the purpose of M. de Coulanges, or perhaps from looking in the wrong direction he has failed to discover it, and he has therefore suggested another, as follows:

"The grammarian Servius, who was very learned in Greek and Roman antiquities (which were studied much more in his time than in the time of Cicero), says it was a very ancient usage to bury the dead in the houses; and he adds, 'As the result of this custom, they honor the Lares and Penates in their houses.' This expression establishes clearly an ancient relation between the worship of the dead and the hearth-fire. *We may suppose, therefore, that the domestic fire was in the beginning only the symbol of the worship of the dead; that under the stone of the hearth an ancestor reposed; that the fire was lighted there to honor him, and that this fire seemed to preserve life in him, or represented his soul as always vigilant.*"

He hastens to add, "This is mere conjecture, and we have no proof of it." Certainly not; no proof whatever, and one who could make this conjecture, has profited little by the light thrown by modern research on the origin of symbols. Yet from this point forward he proceeds as if it were an established fact that the worship of fire and the worship of the dead were identically the same cult. It is not to be denied that the sacred hearth-fire became finally a symbol of home as well as did the *penates*, the household gods. But this is very different from saying that they were the same thing. The worship of fire was, on the contrary, a portion of that nature-worship which M. de Coulanges has attempted to ignore almost wholly; he has failed to adduce evi-

dence that it was connected, except incidentally, with the worship of the dead.

By weakening the basis of his system, however, we do not destroy his whole work. There are several features of ancient law and government which he has explained well. But the symmetry of his work is gone. There are large portions, constructed by a forced interpretation of data, which separate from it and fall away. In fact, its very symmetry and perfectness render it suspicious. It looks too much like a work of art to be an exact counterpart of nature. It is a theory only, and a theory, too, which rests upon an exceedingly narrow basis; and, on the whole, although it is a work which students of primitive culture will do well not to neglect, we do not believe that it is destined to effect a revolution in the study of ancient history.

LAURENT'S HISTORY OF HUMANITY.

ONE of the most extraordinary instances of perseverance in the midst of religious persecution on the one hand and of almost equally intolerable indifference on the other, is that of Mr. F. Laurent, who has recently completed his voluminous work in eighteen volumes. It began in 1855 as a History of International Law; then, at the end of the fifth volume, it took for general title, "Studies of the History of Humanity," and the successive subtitles were, The Papacy and the Empire, Feudalism and the Church, The Reformation, The Wars of Religion, The Wars of Nationalities, Royalism, Philosophy of the 18th Century, the French Revolution, The Empire, The Religious Reaction, The Religion of the Future, with an eighteenth and concluding volume, published in 1870, The Philosophy of History. During all this time Laurent was the recognized head of the liberals in the University of Ghent, and he was pursued relentlessly by the Ultramontane Catholics, headed by the Archbishop of Ghent, and he was obliged to print his book in Ghent, in Leipsic and in Paris; but it has never had the sort of public recognition it deserves.

In the meantime, the author has obtained a much greater repu-

tation, and in a much more agreeable way, by means of the violent abuse heaped upon him by the Bishops in Belgium, for this very book, and by means of the open and avowed hostility shown to him by the Belgian government. The author has remained true to himself, as was to be expected from a man who has made so great a sacrifice for his science and for his conscience. On the one hand he keeps on quietly in the simple scientific course of his researches and reflections; he does not allow himself to be moved by the angry passions of the day, nor does he give way an inch in the pursuit of his great purpose, the development of the unity of the history of mankind.

With exception of the preface, there is not in the whole book the least trace of falling away from the grand scheme (perhaps only too grand) which, like a powerful reasoner, he first laid out for himself. The hostility of the church to his person has not led Mr. Laurent to belittle the high purpose of civilization that was entrusted to the Papacy in the Middle Ages; nay, in some particulars he speaks both often and sharply of certain Protestant errors. The Papacy is, in his view, of great importance as a means of civilization and of union, and he recognizes gratefully and admiringly this form of its development of the human race, just so long as it belongs to it.

But, on the other hand, he remains equally firm in his views as they have been more than once before expressed by him, that Christianity is not the last religion, but that its influence and effort in the world at large are only an aid to some future higher and more united development of humanity. Wherever he finds the Church, or at least the priests in wrong paths, he exposes mercilessly their faults, and shows no trace of a pious belief in "direct succession," and "His Holiness." He sees in the course of human affairs a power above, and is more hearty in this recognition than is many a son of holy mother church; but this power is in his view no Christian, no Jewish, no Mohammedan, but higher still, world-historical and truly godlike. Each of us will have an opinion of his own in these matters, and the church cannot, indeed, recognize Mr. Laurent as one of her "faithful" flock; but every unprejudiced man must recognize the fact that this scholar has pursued his task with deep earnestness and rare conscientiousness, and that in his whole work there is no trace of frivolity or god-

lessness. It is a poor means of underrating him, the contemptuous mention of some pretended errors; the man, as such, stands in intellect on a height that is far beyond the ken of those who have thus striven to pull him down. Laurent is no Catholic, still less a Protestant, and most people would deny that he is even a Christian.

The volume which excited most comment is "The Barbarians and the Catholic Church," but it is by no means exhaustive of these subjects.

It has four main divisions: 1st, a description of the effect of the incursion of the Barbarians on the Roman Empire, especially in Gaul and the neighboring countries; 2d, an analysis of the mission of the Papacy in the Middle Ages; 3d, a description of the Mohammedan faith, its morality and its relations to Christianity; and 4th, a short sketch of the Greek empire.

True, this is not the place for a minute account of what the author has said on these four subjects; we must be content with the assurance that no one can read this volume without great interest and a rich reward. The main ideas developed by it are briefly put as follows: The destruction of Roman civilization, or more properly speaking, degradation, was indeed a painful, but a very necessary measure of providential interposition; the political and moral world that grew out of it, bore within itself the seed of division and anarchy, owing to the excess of the German feeling of personal independence, and to its organization of the division of property; the Christian church, owing to the rough nature and low culture of its clergy, as well as to the want of unity in the lay and ecclesiastical aristocracy, was not in condition to perform its functions as an instrument of civilization until the Papacy arose to be a universal power; Mohammedanism had, it is true, great results on the education and refinement of the world, but fell to pieces owing to its innate deficiencies; finally, the Greek Empire was a conglomeration of impotence, weakness and cowardice, yet was of vast service to Europe by means of its contest for a thousand years against Islam, and as a preserver of Greek language and literature.

Of these different divisions, it may be said that the most instructive is the one which treats of the Barbarians, the most comprehensive that on the Papacy, and the one that is too flattering to its subject, the chapters on Mohammedanism.

In the description of the Barbarians, and the effect of their establishment in old Roman provinces, there is something very instructive in the views of the author, standing, as he does, on French ground ; for he discusses less the individual features of their laws than the social conditions which arose from their colonization of the countries invaded and conquered by them.

There is a great difference between the systems adopted by the German and French Historians of this event, a difference which is founded on their national peculiarities. A German, as is very natural, sees only the German element, and he is interested in the circumstances of the conquest of the old Roman Provinces, if not altogether, at least mainly as they serve to a better understanding of the history of his native country; that is, as they are purely German facts. A French author, on the contrary, sees in the invasion of the Barbarians a violent revolution of the original current of French History, and his aim is to discover how much of purely Roman, and how much of purely Celtic, remains in spite of the Barbarians. The former gives the results of a systematic study of the *leges barbarorum*; the second a variegated, but much less flattering picture, to Germans at least, of his national history. Compare for instance, quite independent of mere external form, the manner in which Guizot and Waitz have discussed the facts and institutions of the Empire of the Franks. True, indeed, the French view is very unfavorable to a fair and honest estimate of the German nation; but it is no less true, that the Germans paint their ancestors only in bright colors, and give no just idea of the overthrow of everything, which they produced in a nation that was fallen indeed, but still vastly more civilized than their own.

Laurent is, indeed, no hater of the Barbarians, but he inclines more to the French than to the German view; any discussion of them, however, by a man of so much talent and such learning as he possesses, completely acquainted too with the German writings on the subject, is sure to be very instructive.

There is no need to be afraid that any German reader will be thereby led to unpatriotic sentiments, for the partiality of Germans for their half-savage forefathers, is deep set in every vein.

In the representation of the Papacy as a means of civilization, M. Laurent has had, to some extent, predecessors; but some of his views, even on this subject, are peculiar and important for

more than their originality. Most Protestant writers of Church History, as we know, represent the gradual successful advancement of the Bishop of Rome to be the head of the whole Latin Church, as a conquest gained by help of the Bishops, even the Metropolitan and especially the National Churches. The volume now before us takes another view of this matter. It starts with the proposition, that after the conversion of the Barbarians to Christianity, the Bishops established an aristocracy made up, not of any formal organization, but of men who had the same interests and the same stations, and were therefore closely allied in Church and State. It was, in the beginning, necessary and useful for the process of conversion, and to establish some order, as well as to found a power that was able to resist the feeling and the habit of individual independence; but it soon became a horrible sink of corruption. In order to free the Church from this evil, (and our author describes it at great length,) the Papacy had to take to itself a vast extension of power, and providentially it was able to obtain it. Every reader will acknowledge that this part of the work is bold and attractive, and that it is founded on deep and extensive study of the sources of History.

The reader is less likely to agree with our author's view of Mohammedanism. Setting aside the question whether Islam stands on the same footing with Christianity and Buddhism, and is one of the religions of the world, and as such is intended to pave the way for a gradual growth into universal religious unity, it is not possible for us to agree to the very flattering view of the inner strength of Mohammed's doctrine, as it is here given: real moral family life, and social as well as civil freedom, are not reconcilable with its tenets; it puts fanaticism and oppression of other sects, in the place of reasonable conviction and a benevolent hope of the salvation of those who wander in the paths of error; owing to this, it is a source of harshness and one-sidedness; and quite aside from all theological or clearly Christian views, the gradual extension of Mohammedanism must be looked upon as a misfortune for the human race. The author may be right enough in saying that the Christians are not entitled to consider theirs as the only possible religion that is to unite and civilize the world; but there can be no sort of doubt that of all means of civilization that have yet appeared, this is, relatively speaking, the best,

the most truly human and most favorable to intellectual development. If M. Laurent were to point to his own hard fate as a proof of the contrary, there might be said to him in reply, that first of all, the use made of its power by an officer of the Church is not the test of universal Christian morality; and second, that no view of the world's progress as bold as his own, could have grown up on any other than Christian soil and Christian cultivation.

Had he been a Mohammedan, and had he written such a work as this on Mohammedan soil, (taking for granted the possibility of the thing,) he would hardly have escaped as he has here, with a few Pastoral letters, and with being put in the *Index Expurgata*. Had he directed us to the fierce contests that once divided his own country, we might answer that the advancement of Christian cultivation has put an end to them, while in Mohammedan countries, an introduction of unbelief is possible enough, but not an increase of mildness nor the advancement of religious toleration.

Bethis as it may, the work now under discussion is a most interesting addition in the field of science; and the author deserves thanks for the courage with which he has persevered in continuing his labors, and the increasing sacrifices he has made to publish it. He could only with the greatest pains find a printer, and Belgian publishers absolutely refused to undertake its publication. We need hardly add that the original object of this work, the *History of International Law*, is not carried any further on in the last, than it was in the earlier volumes, but that its development is at best postponed to a much later series of volumes. Such as it is, here is a work to which a man of extraordinary learning and industry, has given a lifetime of labor; and that labor has been varied only by a series of conflicts that must forcibly remind those who participate in it, as well as all who look on as spectators, of the change that has passed since the interdicts of the Church could either silence its enemies or excite the opposition of those under whose banners the contest was waged.

"DARWIN ANSWERED."¹

THIS genial writer has a passion for changing his position in space, peculiarly American. It is only a year since we have heard him delivering broadsides into all the propositions usually considered by scientific men to be unassailable, under the guise of a conversation with a citizen of the sun. This time he has chosen another method of attack in order to deal with another class of thinkers, and he very ingeniously leads us to infer only towards the close of the first essay where this is—the insane asylum.

It is a well-known parliamentary device of a temporary majority to move a reconsideration of a motion already carried, and then to pass it finally, not allowing it to be again raised. These tactics Mr. Benson has most skillfully carried out; and yet so plausibly is the essay written, so much apparent earnestness does it betray, that it is only after having been thoroughly convinced of the inherent weakness of the side at which he is indirectly aiming that we see light through the plan. In the first place, with a previous experience of the contents, the title is a capital satire on those "anonymuncles" (as Charles Reade calls them), who are incessantly demanding the public ear with promises of demonstrating the wildest dreams and overthrowing the most steadfast pillars of accepted truth. Having read the article through, we thoroughly enjoy this keen sally of the title, "Darwin answered, or Evolution a Myth." In order that the reader may not suspect the seriousness of the reviewer, he contrives to open by a pretended attack on Herbert Spencer's inconsistency in observing that men seek for a system in nature as if nature had at heart the "convenience of book-making," and immediately launches out into a theory of evolution. The satire here is deep but pointed. Those magazine philosophers are ridiculed who confound *different* with *opposite* propositions, by a pretence that the author does not see that Spencer referred to those very schemes of existence which begin by laying out rigid lines, and end by attempting to arrange facts within them.

¹ Philosophic Reviews. Darwin Answered: or, Evolution a Myth. Geometrical Dissertation. Notes on Definitions. By Lawrence S. Benson. New York: Jas. S. Burton, 149 Grand Street, 1875.

The next capital thrust is made after a few handsome lunges, when, after selecting Darwin as more consistent than Spencer, and enumerating the headings of his most striking chapters, Mr. Benson suddenly confronts him with his admitted inability to explain the differences of type in the human race, and then represents him as hurling every known fact against some other obstinate fact, and retreating "under cover of ignorance" * * "by asserting that there are unknown facts which *will* eventually prove that the theory of evolution is true." There is no possible doubt about the class here so wittily satirized. Even the most casual reader of current literature recognizes this caricature of those who criticize Darwin without even having read his books, and this aim is still more apparent when Darwin is represented as "ransacking" the earth to support his hobby, and finally basing his belief in it on the future discovery of unknown facts. We fancy we see a good many of this class of critics squirm.

Straightway he impales another class, that which "picks up" its information of Darwin's position, and jumbles objections fairly stated and answered by Darwin himself with those of his critics. To hit off this class, he selects at once the most obvious objection, and that most thoroughly answered in the "Origin," viz: the continued existence of lower types. The neat assumption of unsophistication with which he runs this thread out to the conclusion that everything ought "by this time to have been developed into man," is very funny. If we have a criticism to make, it is that this is a little too much "rubbed in," but its intrinsic fun may easily atone for prolixity.

This object of showing how asinine critics may appear who do not read their author, is still further followed up by some ludicrous observations on selective breeding, and Darwin's inability to *use the facts he has collected*. Still keeping his face straight, he says the theory of evolution according to Darwin "can evolve an African from a monkey better than a Caucasian from a Mongolian." Reverting to the old path of putting utterly irrelevant questions with the air of posers, he says: "Why should there be monstrosity and hybridity? If the embryonic state of all organisms be identical, why should sterility result from inter-crossing?" etc.

After a little he caricatures the literary Sergeant Bateses thus: "Take the United States; how was it they grew so fast? in less

than a century they have outstripped," etc., etc., "and have become equal to the most powerful," etc., etc. * * "But what can be said of Canada, Mexico, and neighboring states? Compared to the United States they are stagnant, asleep," etc., etc. * * "Since the last civil war strangers are now gladly welcome * * and the section promises to advance in wealth, population and enterprise." This whole page is a capital caricature of the advertising kind of magazine writers who, under the title "Darwin answered," or "Macaulay proved an iconoclast," etc., end their articles with "and in the midst of this luxuriant," etc., etc., "where the air of heaven seems to vie," etc., etc., "is a neat little farm, to be had at a moderate price. Particulars sent for a postage stamp, with the address." This breaks the monotony of skewering simply comic bunglers, and is very enjoyable, but as the latter are more numerous, the attack on them is renewed * * * "the food of vegetables is entirely inorganic substances," (pretending never to have heard of carnivorous plants).

Then Spencer is again chosen as the stake upon which to impale Mr. Benson's imbeciles. He chooses the definition of evolution by this sage, "a change from indefinite, incoherent homogeneity, to definite, coherent heterogeneity, through continuous differentiations and integrations."

This text is admirably selected for the purpose. One cannot repress the mental picture of an "end man" trying this sentence for the benefit of "Bones" at Carncross & Dixey's. But their comments, though funny, would soon pall. It needs a master hand to do this business intellectually. Well, first we have the terms integration and differentiation defined for the *Calculus* and applied here. Then the intellectual "Bones" of Mr. Benson's fancy objects that by this process *form* only can be changed, pretending not to know that form is all that we can know of force; and force and matter are the sole factors of philosophy. A very entertaining but rather far-fetched joke is introduced here, to the effect that if evolution were the division of a mass and the putting together of the parts afterwards, that this would preclude the idea of a big thing being evolved from a small one, since a part is less than the whole. And this followed by another, that "a seed is *not homogeneous*, and that therefore this theory has no application to processes by which beings exist." Also that evolution

"requires diminution of form and is not therefore the process by which life is perpetuated." Then as to the adjectives of the definition: "Homogeneity is more distinct than heterogeneity; a substance which is the same throughout is certainly more distinct and definite than another substance composed of dissimilar parts."

This, with some more "objections" in the way of nursery word-splitting, seems to depart too much from the usual trenchant and guarded sarcasm of the author, and descend to common ridicule; but the persistent reader will be rewarded by another piece of brilliant satire. Darwin has owned that natural selection must be understood in a metaphorical sense, but the apology is not received, and "self consciousness is implied to every living creature." * * * * * Supposing that we have various forms of organisms, then we are to suppose "the highest wisdom and intelligence" in them, in order that improved forms may be evolved from them, for they must know the relations of things, etc., etc. "We know that such wisdom can be gained by vast experience only," etc., etc. "Natural and sexual selection mean nothing if not that every species is possessed of a peculiar consciousness, as to know that it is existing in a transitory form; and *in consequence of this knowledge* it must copulate with some suitable individual, in order that its offspring may develop into some superior form." "It is only in domestication that breeds improve, and this is brought out by experience and judgment." These sentences are intended to pillory the drivelling critic; and while we cannot but applaud their success, we feel that the straw man need not have been made quite so idiotic.

Finally we have the religious sentimentalist caricatured. "Those who deny a Creator assert that things exist *necessarily* and necessity implies cause. If there is a cause it must *create* things, and necessarily that which creates is a Creator," q. e. d. Isn't that good? Furthermore, those who seek the cause of the cause are thus answered. "If the creating cause was caused by another cause, the creating cause must have been an *effect*, and in this case it could not be a cause."

This castigates your Middle-Age-schoolman critic.

Finally the essay closes with a *bonne bouche* directed against the sophomorical critics who fail to appreciate the force of prov-

ing too much, by showing the instability of their own theory as well as that of their opponents. "All that is known *is but one link in the chain of the Universe of existences*"—(except the knowledge of this fact, which must be another)—"and to explain the relation of this link, philosophers must know all the past, present and future—in other words have Supreme Intelligence." Ergo, nothing is certain but the deductions of this little essay, which we now leave with many thanks to its author for a powerful, if unusual and indirect method of exposing the principal absurdities of Darwin's critics. Barring a few cases where he draws the fatuousness of the pseudo-objector rather too strong, it is as amusing a little article as we have read for a long time.

We trust Mr. Benson may not destroy its merit by saying that he is all the time serious.

THE ANTI-SLAVERY PROTEST OF 1688.

THE fact that the first protest against slavery proceeded from members of the Quaker persuasion, and was passed in a Quaker meeting, probably would never have been questioned or discussed, had the existence of cotemporaneous testimony fully bearing out the general presumption been allowed to have its due weight. Such testimony is really found in the oldest Minutes of the Philadelphia Yearly Meeting. The book is kept in the fire-proof of the Friends' Society, at their buildings in Arch street, below Fourth. Under the year 1688, the following minute is entered:

"At a Yearly Meeting held at Burlington, the 5th day of the 7th month, 1688—

"A paper being here presented by some German Friends, concerning the Lawfulness and Unlawfulness of Buying and Keeping of Negroes, it was adjudged not to be so proper for this Meeting to give a Positive Judgment in the Case, It having so General a Relation to many Other Parts, and therefore at present they Forbear."

As this distinct acknowledgment of the authors of the Protest as *German Friends* settles the question beyond doubt and cavil, it is considered unnecessary to re-open the argument, and to point out the various errors that led to a denial of the fact. O. S.

NEW BOOKS.

POLITICS FOR YOUNG AMERICANS. By Charles Nordhoff. New York. Harpers, 1875. pp. 259. 8vo. (2d edition in press.)

This is the title of a volume by Charles Nordhoff, the author of several books of western travels, of "The Communistic Societies of the United States," noticed in our April number, and for many years one of the editors of a leading New York newspaper. His purpose is to explain in simple language and by familiar illustrations fitted for the comprehension of boys and girls, the meaning and limits of liberty, law, government, and human rights, and thus to make intelligible to them the political principles on which our system of government in the United States is founded. In beginning with the general principles on which free government rests, he lays down the ground-work of instruction as to the manner in which those principles are applied in our own country. The introductory chapters treat of Society, of Liberty and the Province of Law, of Government and its primary and necessary functions, and of those relating to the intercourse, the education and the trade and commerce of the people at large, of the usefulness of free government, and then coming down more closely to our own, of its different branches and especially of its proper distribution, with the functions and duties of each of its leading organs. In many particulars we think Mr. Nordhoff has done his work very well; and as it was a task that has rarely been attempted in the same spirit, it is to be regretted that he has been led to assume and lay down as positive truths, many political questions which are still at issue; we dissent unqualifiedly from his interjection of a strong "Free Trade" argument in a book that is intended for those whose years, or want of them rather, must preclude an intelligent consideration or discussion of the arguments for and against the particular doctrine that makes part of Mr. Nordhoff's political faith. Still he shows that he has read the works of the leading American authority on the doctrine of Protection, for he cites and approves Mr. Henry C. Carey's theory or demonstration of the gradual growth and settlement of new countries. We too commend very heartily Mr. Nordhoff's explanation of the power and duty of "third parties,"—after a brief summary of the two leading political parties of the country, he says: "there is, however, in every free state a third party, little heard of, without organization, which does not seek office, holds no meetings, and owns no banners. It holds the balance of power, and it silently decides the elections, and on the whole, in the right way. This party is composed of the citizens who think for themselves, who look on the strife little moved by partisan appeals, and on election day deposit their votes for the

man or the policy which, on the whole, appears to them likely to best further the good of the State. This party is the terror of professional politicians and often their confusion. The larger it is in any community, the better will public affairs be managed, for it is this party which punishes inefficiency, corruption or mal-administration of any kind, defeats the caucuses and scratches tickets when corrupt men are nominated." These are wholesome truths for men as well as boys, and indeed the book is likely to be found to contain just as much novelty and instruction for thoughtful parents as for their children, to serve their needs alike by giving a solid foundation for forming sound judgment and honest opinions as to matters of national legislation and as to the province of state and local reforms. Mr. Nordhoff errs, perhaps, in treating from his own stand-point many matters that are as yet open questions, but he is clearly right in urging that greater power should be conferred on executive officers, and that the multiplicity of elections and of officials chosen by popular vote is an unmitigated evil, to which much of our municipal mismanagement is due.

The habit of newspaper writing, of disjointed thinking and hasty composition, is so strong in Mr. Nordhoff, that it comes to the surface in the more serious business of authorship in a connected and completed work. How else can we explain the following curious phrases in the sections entitled "Who vote and why," at page 51: "Of late there has arisen in this country and in England, a vigorous discussion of the propriety of woman suffrage; at the same time that *women have, in far greater numbers than ever before, become independent laborers, which is a calamity to themselves and to society,*" a non-sequitur and both an illogical and an unnecessary conclusion. Even more surprising is the wonderful way in which Mr. Nordhoff, in his chapter on commerce, interjects into his free-trade fallacies this stirring lesson for his youthful readers: "Fix in your mind that *commerce is not a swindling transaction,*" although he follows his own rule by exceptions, which are intended to bring home the so-called truths of free-trade, in itself and in the men who advocate its introduction in this country, the very head and front of corruption at our ports of entry, of dishonesty towards our manufacturers, and of ruin and poverty to our producers and consumers of all classes. With all that Mr. Nordhoff says about "Diversity of Interests," a neat paraphrase for Free Trade, we take instant issue. In this part of his book he is still merely the representative of his old newspaper, one of the organs of the Free Trade importers in New York, who seek their own profit and aggrandizement at the expense of all the rest of the country and of all its real interests and industries. Who will prepare a manual for our schools and colleges, giving the reasons for the faith that we inculcate? The attempt to embody within the modest limits of his book the whole wide range of sub-

jects that belong to political economy rather than to politics in its more popular sense, necessarily brings with it a cursory discussion of such important matters as Banking, Currency, Tariff, and other subjects that cannot really be so dealt with as to enlighten any reader, either boy or man, and the space thus used might have been more profitably devoted to a fuller recital of our historical development. This is done in a more satisfactory way in "Higginson's Young Folks' History of the United States," of which we spoke recently, but if any boy can be found zealous enough after mastering that, to want to read more on the subject of the government of his country, we are sure that father and son could find no better employment than to go together over the various subjects discussed in Mr. Nordhoff's volume. There are many matters that would be instructive to all ages, and there are others on which the matured experience of the elder would serve to supply reasons for questioning and contradicting some of Mr. Nordhoff's dogmatic assertions. But we are sure that all men would be the better for accepting his dogma that "it is your duty to act generally with some political party, and to exert your influence upon its leaders to induce the nomination of capable and honest men for office, and it is your duty, if your party nominates a bad man, to vote against him." In the same wholesome spirit is the section on Primary Meetings, and it is refreshing to find that, even if the experience of New York be included, Mr. Nordhoff still thinks that our party politics are more intelligently, less dishonestly, and more honorably conducted than those of Great Britain, and that the average of political morality is higher in the United States than in any other nation of the world. The appendix gives the Articles of Confederation with the date, 1778, the Constitution of the United States, with its Fifteen Amendments, but no dates are supplied, a very serious omission indeed, although both the Declaration of Independence and Washington's Farewell Address, which follow, are properly furnished with this important addition, and a very complete index, giving catchwords of Mr. Nordhoff's own theories, rather than of the leading parts of the book itself. The subdivision into paragraphs is of small use in a book that has so many natural subjects of distribution, and it consumes space to no advantage. Still, in spite of these faults of style and substance, the author's purpose is excellent, and he has brought to his task many qualities that make it a very valuable addition to our slender stock of political literature, and a useful hand-book for old and young; it is full of suggestions and replete with matter that ought to invite to study and reflection of political questions, such as too often pass unheeded in the hot discussion of men rather than principles.

MY DANISH DAYS, with a glance at the History, Traditions and Literature of the Old Northern Country. By G. W. Griffin, late United States Consul at Copenhagen, Author of "Studies in Literature," etc. Claxton, Remsen & Haffelfinger, Philadelphia.

Some one has said that any man could write an entertaining book, if he would set down faithfully all that he saw and heard. The volume before us is a proof that there is much truth in the saying. It is a series of "hurried jottings" which contains much that is interesting and perhaps even more that is useful. As regards the style in which it is written, so far as it can be said to have any, it is that of a guide book, interspersed with reflections, moral and otherwise. The writer, we should say the compiler, seems to have proposed to himself in the first place to put as much information as possible in as small a compass, in which endeavor he meets with a fair degree of success. But when he loses sight of this aim, and undertakes to do some fine writing, the result is not happy, and the reader, though convinced that the author "means well," confesses to himself that the efforts have not met with their deserved success.

Even as a guide book there is much that is objectionable. We are told (page 22) that "the Copenhageners are good livers," and after getting over our doubt as to whether we should not for "are" read "have," we are confounded at learning in the next page, that the hotel waiter would not bring to our author eggs, "the way I wanted them." At page 146 is the statement, "I had *not* been in the room but a few moments."

Describing a statue of Venus by Thorwaldsen, he says "Her gown, which she had taken off at the request of Paris, is at her side," etc., (page 107.) Story, the sculptor, is mentioned as having written, "such a beautiful and *truthful* life of his father:" we are gratified to learn this; doubtless Story also would be. Mr. Griffin is an admirer of Thorwaldsen, of whom he says: "His fame and genius are world-wide, and his museum is the Mecca of sculpture. Everything from his chisel bears upon it the ineffaceable stamp of his genius, and it is *prouder than when blue iris bends*." Whatever this may, or can mean, we humbly confess we do not know; and we are saddened by the reflection that probably we never shall. It is "one of those things that no fellow can find out."

Haste is an insufficient excuse for such shortcomings as these, and numerous other like ones. The substance of the book is deserving of a better shape. It opens with a description of Copenhagen and its people, which, though as was remarked, much after the manner of a guide book, is entertaining, and very complete. He observes that the butter there was the best he ever tasted, whence we in this city might conclude that Mr. Griffin is not a Philadelphian. The next four chapters are devoted to a detailed

account, still *à la* Murray, of the Museums and Picture Galleries of Copenhagen, and of Queen Dagmar's Cross, "the oldest enameled cross in the world," a fac simile of which was presented to the Princess Dagmar on her marriage to the Prince of Wales. There are sketches of various historical places, personages and events, somewhat confused, but still readable, a chapter on the early explorations of the Northmen in Iceland and America, one on Danish literature, and one on the archæologist George Stephens, by birth an Englishman. But the chief interest of the books is found in the sketches of Thorwaldsen and Andersen.

Both these celebrated men achieved fame and fortune by their own unaided efforts; both underwent dire adversity. They were warm friends, and admired and appreciated each other. It is interesting to know that Thorwaldsen's earliest patron, by whose aid he took the first step on the road to prosperity, was an Englishman. From Andersen Thorwaldsen would even accept unfavorable criticism. Asking his opinion of the costume of his statue of Pilate, and receiving a frank avowal of his disapproval, Thorwaldsen exclaimed, "and that is my opinion too," and dashed the model to pieces. The Baroness Stumpe, who was present, reproached Andersen as the cause of the destruction of what would have been an immortal work. "It is of no consequence," interposed the artist; "I can very soon make another immortal one." Many more like anecdotes Mr. Griffin relates, in a way which attracts our interest, despite what we must term its uncouthness. One merit he may lay claim to, namely, that notwithstanding so many demerits, he can entertain his reader well. It is somewhat of a shock, though, when engrossed in the narrative of Andersen's life, to read, "I shall never forget the first visit he paid me"—"he reminded me of one of my early schoolmates with whom *I used to play leap frog.*"

Probably no man ever lived to whom children's hearts went out so spontaneously, as to Hans Christian Andersen. He knew it, and was delighted with it. "I can have no better friends than the children," he said, when the author on one occasion told him how, in America, he had been shown to some children as the man who knew Andersen, and how they crowded round him to hear about the great story-teller. Andersen seems to have felt early the consciousness of his powers. "I will be famous," he tells his mother, on the eve of departure for Copenhagen to seek his fortune. On this same occasion "a wise woman" prophesied that "in honor of him Odense would one day be illuminated." The prophecy was literally fulfilled.

The story of the friendship between Dickens and Andersen, and their intercourse on the latter's visit to England, is well told, and the author draws with much discrimination a comparison of their relative merits as readers in public. "I heard Dickens read, and

I was moved to tears, but I knew that the author himself was reading the story; but when I heard Andersen read, I did not think of the author at all, but wept like a child, unconscious of everything around me." In the numerous selections, both of prose and verse, from the "Venerable Bede" to Mrs. Browning, with which the book is filled, the author has shown the quality which elsewhere he lacks, good taste; and on the whole an intelligent reader may well bestow a spare hour or two on "Danish Days."

HISTORY OF THE CONFLICT BETWEEN RELIGION AND SCIENCE. By John William Draper, M. D., LL. D., etc. Pp. xxii. 367. 12mo. New York: D. Appleton & Co.

Exactly why this very special, not to say curious, treatise has been admitted into the "International Series" of scientific manuals, is somewhat hard to say. Such manuals are generally summaries of the results reached in this or that department of scientific research, stated in terms intelligible to general readers, and in a form attractive and interesting to the unscientific mind. But this treatise takes up one of those border subjects, at once polemical and tempting to rhetoric, which are treated commonly in secondary treatises, which put forward no claim to systematic elaboration.

The unwary reader may expect that Dr. Draper has here undertaken to utter a solemn warning to the large class in modern society, who have accepted science as their scheme of the universe, against repeating the mistake of those who have persecuted in the name of religion. That such a warning is not altogether needless, may be inferred from the policy now pursued by this element in Germany, and from the announcements of such popular leaders as Huxley. But Dr. Draper is not far-sighted and large-minded enough to comprehend this danger,—the danger that the favorite weapon of the "servilists" and "obscurantists" is now to pass into the hands of "liberals" and "scientists." He sees no lesson in that past for anybody but the theologians; he presents himself as the all-sufficient judge of their pretensions and their duties, and lectures them with a sententious authority worthy of a Dr. Busby. From the general tone of his book, one might suppose that our author had spent too much valuable time in reading the "Science and Religion" articles of third-class religious newspapers, and had gradually fallen into their tone, and learned to imitate them with a success that cannot be said to characterize anything else in the work.

Having to write about science and religion, he avoids attempting the definition of either. As we strive to reach his sense of their meaning in the study of his specific treatment of this or that

opinion, we come to the conclusion that by science is not meant any specific method of study, or any specific bodies of knowledge reached by such methods, or any special spheres of knowledge, as discriminated from other spheres. By none of these criterions is Giordano Bruno a scientific man, or are his opinions matters of science; yet the execution of Bruno after his condemnation by the Roman Inquisition is one of Dr. Draper's instances of the persecution of science by religion. Bruno was a metaphysical philosopher of the high *a priori* school, and no more a man of science than Spinoza or Hegel. But science does seem to mean to Dr. Draper the conception of the universe as unity of substance controlled by a unity of force, however that conception may be reached and in whatever connection held; and religion seems to mean to him little else than the rejection of that conception.

In view of this fact, the whole book is little more than a huge and elaborate fallacy. He has indeed shown, as theologians themselves have shown, that the Catholic church especially has again and again made the mistake of proscribing opinions as hostile to the faith of Christians, which have been afterwards generally accepted as verified by fact and experience. He takes the Catholic church especially because it is an *extreme case of this*. That the church has survived such blunders—that her influence has not been destroyed by their discovery to be blunders—might very well have suggested to a Darwinian that there must be a wonderful vitality in the institution which sustained such shocks to her prestige. And when we compare the questions thus raised in the past, with those with which modern science of Dr. Draper's sort assails Christianity itself in its very life and its foundation principles, we fail to see any force in the *argumentum ad verecundiam* which Dr. Draper would derive from history. Were the church to take the position that the Bible is inspired and authoritative as to its morals, its faith, its politics, but may contain mistakes in matters of physics, all the issues heretofore raised and decided against the theologians would be fully covered. (We do not say that this concession is necessary, but that it fully meets the case.) But the matters now at issue are not questions of physics; they concern the very foundations of all spiritual philosophy, and all the concessions made as regards any less important sphere of natural science, cannot prejudice these new and larger issues.

In details, Dr. Draper is continually irrelevant and not always fair. He does not seem to have had material enough on his proper subject to fill up the book, and so lugs in his opinions on all sorts of questions that are only indirectly concerned, and in regard to which there are scientific methods of verification. His knowledge of Old Testament exegesis is some what *arriere*, being that of the school of Eichorn; in regard to the New Testament, as is seen by his wonderful, though brief account of the rise of

Christianity, he may be said to occupy the standpoint of Suetonius, or any early Pagan that had not seen a copy of the book itself.

As to his fairness, he seems everywhere to hold a brief against all the theologies. Nothing good can ever have come out of them. Arab science and literature is a most wonderful thing, and owed absolutely nothing to the theology which found the Arabs an isolated, ignorant people, brought them into contact with the rest of the world, and awakened the most wonderful questionings in their minds as regards even this physical universe. The unprogressive state of science in the middle ages is due only to the suspicion and the intolerance of the Catholic church, although it was equally shared in by those sciences of which the church entertained no suspicions whatever. In fact, wherever the natural conservatism of the human intellect, of which we have abundant illustrations on every side of us, can be fathered on the theologians and their baleful influence, they are not spared.

On the other hand, all extenuating and compensatory facts are conspicuous by their absence. The great number of cases in which the opposition of the church was brought to bear upon false and now exploded theories, are never mentioned. Nor do we hear of any in which she stood between scientific innovators and their own class, for the defence of scientific progress. Take the case of Vesalius, whom nearly all the medical men of Europe would have had Philip II. send to the stake for questioning the authority of Galen and dissecting a human body. It was the decision of the theologians of Salamanca, in the face of an outcry in which men like Eustachius shared, that saved the life of the founder of anatomy. Science and religion, through their recognized representatives, were as clearly arrayed against each other in this case as in any other; but the theologians were right, and the matter finds no place in Dr. Draper's history.

What is called religion—the conviction that an Almighty God rules this universe and imparts light and direction to his creatures—is not hostile to free inquiry; it is the very preliminary to it. Till that conviction took root in the heart of man he had no time for such trifling as scientific research must have seemed to him. The earth was full of terrors and bogies, and a slavish superstition occupied all men's thoughts. If a certain class of scientific men were to succeed in extinguishing that conviction, as they seem bent on trying so much, those lesser and false lights would again shine out as the central sun disappeared. "Where the gods are not," says Novalis, "the ghosts bear rule;" and under that rule the progress of the race in the mastery of the physical facts of the universe would meet with a decisive check.

MODERN SKEPTICISM: A Journey through the Land of Doubt and Back Again. A Life Story. By [Rev.] Jacob Barker. 8vo. Pp. 448. Philadelphia: Smith, English & Co.

Mr. Barker is the gentleman whose brilliant defence of deistical principles and attack upon Christian revelation, made somewhat of a stir in this city some years ago, and culminated in an exciting public controversy with a much less able man, the late Dr. Joseph Berg. This is the second autobiographical work that he has published; the first (*The Autobiography and Confessions of a Man*) appeared at the time when he had so far worked away from the Methodism in which he was brought up, as to accept the Unitarianism of Channing, without as yet rejecting Christianity. It contains some very curious pictures of life among the lower middle-class sects of the English people, and the practical weaknesses of Methodism. It is the picture of a mind endowed with some idealizing power, cast in with a people singularly devoid of it, whose Christianity has hardly made their lives less sordid, vulgar and ignoble. It depicts very fully the steps of his alienation from their creed because of its association with the professions and characters of intolerable people, and the grasp with which he clutches at the broader and more humane, if less positive gospel, of the Unitarian churches.

The present work goes over the same ground, but far less particularly as regards the earlier period. It tells of the steps by which Mr. Barker went on almost to atheism, and then the revulsion which brought him back substantially to the faith of his childhood. His change of mind may be said to have arisen from the conviction that the Christian ideal is not to be sought in the churches or the theologies, which are but imperfect approximations, but in the revelation of God in Christ, the ever living and freshly realized ideal to which Christian life and thought must ceaselessly come back for new life and fresh inspirations. He speaks as fearlessly as in his first book of the faults in churches and professors which had repelled him from the creed of his childhood; but he speaks like a man who has attained a deeper insight, which keeps him from stumbling at these.

The book seems to us to show that class churches are open to very serious practical dangers—the danger of alienating a minority of their members from their creed, as well as from themselves.

NEW YORK TRIBUNE EXTRA, NO. 21: Scientific Views of Comets (illustrated); Philological Convention at Hartford; Chemistry's Centennial; American Science Association at Hartford. Lex. 8vo. Pp. 93. Price 25 cents.

- No. 23: Prof. Tyndall's Belfast Address on Science and Religion; Are Animals Automaton? by Prof. T. H. Huxley; Man's Earliest History, by Dr. McCosh; Matter not Inherently Creative, by Dr. E. E. Miner. Lex. 8vo. Pp. 32. Price 20 cts.
- No. 26: Six Lectures on the Relation of the Bible to Science, by Dr. G. W. Dawson, of Montreal; The Bible on the Side of Science, by Rev. Dr. Howard Crosby. Lex. 8vo. Pp. 32. Price 20 cents.
- No. 27: The Claims of Science Met, by Prof. Chas. W. Shields; Crystals and Molecular Forces, by Prof. Jno. Tyndall; Natural Academy of Sciences at Philadelphia; Kings of Business, by James Parton; The Transit of Venus; Prof. Marsh's Trip to the Bad Lands; Sources of Polar Heat, by Prof. S. P. Langley; Plants that Eat Animals, by Mrs. Mary Treat. Lex. 8vo. Pp. 65. Price 20 cents.

Richard Cobden, in one of his quarrels with the Thunderer, announced it as his opinion that the newspaper of the future would find its function to be the record of facts rather than the enunciation of the opinions of its managers. We have no hope and very little desire that our daily papers should abandon the latter function, but we do so far agree with him as to think that very much is possible in the discharge of the former, which has not yet been attempted. Our newspapers ordinarily find opinions easier to get than facts, and so much cheaper, that the disproportion of the two in their columns is like that of Falstaff's consumption of sack in comparison with the bread eaten by that incarnation of fatness and wit.

The New York *Tribune*, more than any other American newspaper, has been awake to its duty as the recorder and reporter of the world's life and wholesome activities. Others have surpassed it we think as recorders of the world's death—its scandals, its vileness, its infamies, and its rogueries—but in Mr. Greeley's hands and from its very first days, when Dr. Lardner was a great light in science, it labored to bring the public at large into contact with the scientific, literary and general intellectual life of the day. Many set it down as a great boon to society when, on the morrow of the great defeat of 1872, it announced its purpose to give still larger space to this work, and none to the partisan defence of any party policy. The former promise has been amply kept since the death of the great editor, and its reports of what is said and done in the literary, the scientific and the ecclesiastical world have become so valuable that a popular demand for their reproduction in special supplements, and then in a form more capable of preservation, has arisen. The need of some such record of such productions of each year as are worth preserving, has long been felt. It was met in the earlier part of the century by Niles' *Weekly Register*, whose con-

tents reflect fully the more limited range of popular interest of that day. We are in hopes that this new venture of the *Tribune*, which we are glad to know has met with very great success, will grow to something of that sort, without passing out of the very competent hands which have undertaken the work.

For the benefit of those readers who have not seen any of these supplements, we have copied the contents of four now before us. These are all, as most of the extras are, scientific in their contents. But others contain letters of travels by Bayard Taylor, the pamphlets of Gladstone and the answers to them, the eulogies on Sumner, the proceedings of the Evangelical Alliance, and many other documents of interest to various classes, or to readers at large. So far as we have seen, nothing has been admitted into the series unworthy of the place—nothing specially worthy of a place has been excluded—and great fairness has been shown in giving both sides a hearing on disputed questions, especially on the current controversy on science and religion.

THE PERIOD OF THE REFORMATION, 1517 to 1648. By Ludwig Häusser. Edited by Wilhelm Oncken, Professor of History at the University of Gressem. Translated by Mrs. G. Sturge. Pp. 702, octavo. New York: Robert Carter & Bros.

Professor Häusser is already known to a large number of Americans as Frederick List's biographer and editor, and the very thorough and careful way in which he discharged those duties of friendship, prepares us to welcome anything that comes from his pen. His *Geschichte der Zeitalters der Reformation* is probably his most popular and successful work, and as a brief but thorough discussion of the whole period, down to the close of the Thirty Years' War, it has no superior of its kind, even in the German language. There are more complete and thorough works on the theological aspects of that history. Marheinecke's *History of the German Reformation* is a masterly book, and has never been superseded; Ranke's work on the same period is enriched by an extensive study of unused sources, but it is not written down to the level of the people; D'Aubigné's series of vivacious sketches do not make a history, and are characterized by great narrowness, and consequent one-sidedness.

Prof. Häusser studies the subject, as might be expected in a friend of List, from a national point of view. He sees in the Reformation the birthday of the nations which compose the state system of modern Europe. In it the reaction against the hierarchical universalism, the cosmopolitanism of the earlier middle ages, fairly culminated; the human mind came to full consciousness of the meaning of the intellectual movement that began in literature with Dante and Chaucer—the movement towards national

individuality. Germany, of course, holds the central place in the story, and the tragedy of her great defeat in the attempt to become politically one people is the burden of the book.

Unlike most German historians, Häusser is thoroughly objective. His pages are never burdened with philosophical theories, and rarely garnished with reflections. He plunges *in medias res* with more than Homeric promptness, and throughout the book he gives a terse, matter-of-fact, but vigorous narrative of the facts. The loss of his introductory lectures on the middle ages adds to this appearance of abruptness, but even at places where the historian might be expected to turn aside to philosophize, he presses vigorously forward, and it is only from incidental phrases and from the general impressions left on the mind by the book that we are able to learn his own philosophy of the facts. To most readers this will seem a merit in the book.

The translator has done her work fairly well. In one or two places she has not hit on the exact rendering of some German epithet, and some archaic words quoted from Luther and others—such as *parteken-hengst*, p. 5—have been too much for her. But she has given us a good translation of a good book, and that on a part of history represented in the English literature chiefly by a great number of very inferior histories.

AN ADDRESS TO THE PEOPLE AND REPRESENTATIVES OF LUZERNE COUNTY, by C. E. Wright, G. W. Palmer, Lewis Pughe, A. B. Dunning and Henry W. Palmer, Members of the Constitutional Convention of 1873, Luzerne Co.

Five very well-meaning gentlemen of Luzerne county, who sat in the "Convention of 1873," as they call it, and, no doubt, made as prominent figures as they could in that reactionary crisis, which, in Philadelphia, resulted in the change of the title of Alderman to Police Magistrate, and throughout the State did away with the form of special legislation, have been a good deal concerned by the appearance of the report of the Commission to which reference was made in this publication last March; and have, in language which our cotemporary, the *Legal Gazette*, admits may be "a little harsh," conveyed their criticism to the world at large in a ponderous and altogether uninteresting proclamation. But we do not think that their language is harsh at all, unless words which are ill-chosen, and terms of expression which are vulgar, constitute, independently of their animus, or when their animus is clearly conciliatory, the fault so delicately suggested. Only when the gentlemen tell their constituents, and, through this convenient, but contracted channel, their admirers beyond, that two of the amendments proposed by the Commissioners are designed, "*plainly stated, to restore log rolling,*" do

they reach that height of sham indignation which the Legal Gazette can think it best to deprecate *in pianissimo*. No one who has any knowledge of the body of councilors thus attacked (and no one without it dare claim to know their motives), of which body one member was the Chief Justice of Pennsylvania, can regard so temperate an allusion to this absurd outburst with insensibility or even patience. In this relation the language of the five gentlemen is simply brutal, and the criticism of their herald in as bad a tone as its silly editorial of last year, made by a member of the assembly, threatening the annihilation, by the "Convention of 1873" of our court of last resort if it did not decide a given question in a given way; in a way, moreover, quite impossible to an intelligent creature, and all the more so to a jurist.

The matter is hardly worth mention at any time, and we certainly should not mention it now, were it not with a view to the deliberate continuation of the discussion of the question of constitutional reform through constitutional law, which seems to have stirred as yet in masses only those men who seek merely the abolition of prevalent political evils, and not only do not care a fig for, but in truth abhor, and, therefore, purposely disregard all applicable scientific principles. These are incredulous of the unseen, and consequently refuse to believe in anything but immediate agencies,—that is to say, obvious causes, directly connected with specific effects. If, say they, the current legislation is bad,—if the appropriations of public money are fraudulent,—if railroads charge freights that you guess they should not; at once cripple legislation, stop all appropriations, and take their earnings from the railroads. Thus rapidly, and effectually, the evils can be dissipated, and the body politic may rejoice. Certainly, while no one will deny that this kind of reformation would prove effectual and final, a respectable number of us must admit that it could not possibly be inaugurated in any other connection, with a view to any other object.

And undoubtedly there is a large class of men at hand, who, besides unmeritoriously detecting fallacies, candidly speaking, as palpable as nursery casuistry, have really earned the gratitude of their fellows in mastering the principles which alone must be applied if the personal comfort and happiness of the community are to be secured. From what has come to us, we feel justified in the criticism, that the work of the late Commission has gravely disappointed such too-silent observers. It is a fact that alike the friends and the opponents of the new constitution of this state are more than dissatisfied with the recommendations of amendment which have been made, and are quite ready to indicate, with a general appreciation of our wants ensuring unanimity almost, the nature of other recommendations which should have been re-

ported in their stead. And in one direction especially, it is certainly now the duty of competent advisers to prepare the best counsel.

The January term of the Supreme Court closed about a month ago, having had before it, for Philadelphia county, a list made up ere the present system of common pleas courts had gone into operation. The minimum number of cases on that list was four hundred and thirty-eight. Of this, the maximum number of cases determined was one hundred and ninety-seven. That is to say, leaving out of the question certain causes which were added by special order, or in manuscript, we obtain the minimum noted; and counting in such as were non-prossed, or marked for second call, we obtain the maximum. On a condition of things like this, the late Commission reported that the eleventh section of our bill of rights will stand violated, in the denial or delay of justice, unless some remedy is immediately adopted. And yet the present condition of things is far worse than that which induced this strong language. The number of courts which concurrently supplied the list noted, if we confine ourselves to civil issues, was, at most, five; three held by single judges of the District Court; one by the Common Pleas, and one by the Orphans' Court; and these tribunals were by no means sitting all the year round. Now, however, by a similar computation, it is found that the number is increased to nine, and that the tribunals, save in midsummer, will be continuously in session. It may be prudently said that the writs of error have been doubled, and that the Supreme Court issues will, next January, exceed one thousand. The result might be pictured to the general reader in a very telling way by any one of a mathematical turn, who had the time and the space in which to display in figures the increase in the labor to be carried there, and the decrease in the capacity of the court to encounter even the lesser labor previously thrust upon it. This limitation of power shows how unquestionably true it is, that, from one point of view at least, our State is not sovereign.

DAYS NEAR ROME. By Augustus J. C. Hare, author of "Walks in Rome," "Memorials of a Quiet Life," etc. With Illustrations. Two volumes in one. Pp. 333 and 363. Philadelphia: Porter & Coates. 1875.

Mr. Hare has no competitor save Mr. C. J. Hemans in the work of bringing before the English-speaking public the antiquities of Pagan and Christian Italy. Both these gentlemen illustrate the new and more catholic phase which antiquarianism has taken. In the days of "classical tours," all interest in any save Pagan antiquity was tabooed, and Italy was traversed and discussed as if her history had ceased when the lower Empire fell. But the greatness of the middle ages of Italy has dawned upon the world;

Francis of Assisi, Thomas of Aquin, Benedict of Nursia, Rienzi and Dante, have come to bulk as large in our thoughts as Pliny or Cicero, and the antiquarian no longer contemptuously passes by the later monuments in his search for those that belong to the earlier ages.

This very interesting and tasteful volume is the complement of its author's *Walks in Rome*; and it describes for us what may be reached by easy excursions from the Imperial City, undertaken in all directions. Nearly all of what is here depicted lies entirely out of the ordinary line of travel, and will be as new to most of those who have visited Italy as to anybody else. Mr. Hare is eminently "a credible person with eyes;" he says and describes with great vivacity, and possesses such thorough knowledge of the history of Italy and of its literatures—ancient, modern and mediæval—that every landscape has for him a multitude of associations. The pages of Livy, the epistles of Cicero, the odes of Horace, the cantos of Dante, the *Rime* of Petrarch, the lives of the great saints, doctors and founders of Orders, the family history of the great Italian houses—all are subsidized by him, and at once receive and cast light upon the localities visited. All who feel an interest in any one of these, will find here plenty to make poetry and history more real to him, and all will find in Mr. Hare a sympathizing guide.

One who writes so well might well have dispensed with quoting other travelers, but Mr. Hare everywhere supplements his own narratives and descriptions with fine passages from modern writers—English, French and German. Whoever has seen with clear eyes any place here described, is allowed to have his say, and the great historians, especially of art and literature, contribute to refresh our memories as to these facts of local interest. Those to whom Mr. Hare's book is but one among many on the subject, may very well find fault with being presented with passages from Denham and Gregorovius, Niebuhr and Arnold, Crowe and Calcaselle; but to most readers this drawback is a real advantage, and the only fault we would find is with the extracts from French authors, which are left untranslated. A writer who addresses himself to the general public should not assume an acquaintance with any but the language he which himself employs.

We would select as especially interesting the descriptions of Mount Soracte, of Monte Cassino, and of Aquino. The second is the only monastery whose existence is still formally tolerated by the Italian government, though a few others are so poor and worthless that they have escaped sequestration. At Monte Cassino, Benedict began the Middle Ages, organizing the first great monastic order of the west in a neighborhood still consecrated to the worship of Apollo. Victor Emmanuel has razed the edifice of monasticism, whose foundations were then first regularly laid, and

Mr. Hare, who is no lover of the Italian government, is very much disposed to think he had better have spared than destroyed it. But his adverse criticism of Carlo Borromeo, as the great patron of beggary and of the alms-giving that makes beggars, seems to us a complete concession of the principle at stake and a justification of the legislation by which an impoverished nation refuses to tolerate the existence of mendicant orders in its midst. Were the monks of to-day what the Benedictines of the seventh and the following centuries were, more might be said on the other side.

The illustrations of the book are very well suited to their purpose. Some are a few unpretending sketchy lines; others are more elaborate wood engravings; all help the text and make its descriptions real to the reader.

GOVINDA SÁMANTA, or *The History of a Bengal Ráiyat*. By the Rev. Lal Behari Day, Chinsurah, Bengal. Macmillan's Popular Novels. Pp. 383. \$1.00. Macmillan & Co., New York.

The *History of a Bengal Ráiyat*, is a more appropriate name for the book than *Govinda Sámanta*, the hero being quite second in interest throughout. He is undoubtedly a type of the ráiyat or husbandman class of Bengal, in whose person misfortunes have followed each other in such quick succession as to cause his untimely decease in the prime of manhood. The writer, a convert to Christianity, is evidently well versed in the habits, manners and customs of his countrymen, which are here depicted in pleasant style. If at some future time the Rev. writer undertakes to portray the successful ráiyat, we think he will succeed with more satisfaction.

The reader will be unable to follow the course of this history without regretting that such benighted ignorance as is here depicted exists in any part of the world, more especially where intelligence is not one whit wanting.

The book is divided into sixty-one chapters, not one of which could well be dispensed with. We find nearly all the principal incidents likely to occur in the life of a ráiyat; yet two important Bengalee festivals have not in any way been introduced: we mean the Swinging festival and the Dooraga Pooja. The former lasting but one day and held by the lower class of natives. The latter is a holiday of fifteen days duration: government and banking houses entirely or partially close their establishments, and work generally is at a stand still except that connected with the worship of the Goddess Dooraga and her myrmidons.

To any one desirous of learning the everyday life of an industrious, unsuccessful farmer of Bengal, we readily commend this history.

BOOKS RECEIVED.

- Secrets of the Sanctum. An inside view of an Editor's life. By A. F. Hill. 16mo., pp. 312, \$1.50. Philadelphia: Claxton, Remsen & Haffelfinger, 1875.
- The Vatican Decrees. By Henry Edward, Archbishop of Westminster. Catholic Publishing Company, New York, 1875.
- A letter addressed to His Grace, the Duke of Norfolk, on occasion of Mr. Gladstone's recent Expostulations. By John Henry Newman, D. D. Price 50 cents. Catholic Publishing Company, New York, 1875.
- The True and False Infallibility of the Popes. A controversial reply to Dr. Schulte. By Dr. Jos. Fessler. Price 50 cents. Catholic Publishing Company, New York, 1875.
- The Life and Times of Sir Philip Sidney. New and revised edition. Pp. 286. Price \$1.50. New York: J. B. Ford & Co. Philadelphia: J. B. Lippincott.
- Katerfelto: A story of Exmoor. By G. Whyte-Melville. The International Series. 12mo., pp. 313. Price \$1.25. Philadelphia: Porter & Coates.
- Elementary Philosophy. Part I., being the science of reasoning and the art of correct reasoning according to science; or logic critically treated and applied. By James M. Willcox, Ph. D. Pp. 126. 75 cents. Philadelphia: Porter & Coates.
- The Mosaic Account of the Creation, the miracles of To-day; or new witnesses to the oneness of Genesis and Science. By Charles B. Warring. 12mo., pp. 292. Price \$2.00. New York: J. W. Schermerhorn & Co. Philadelphia: J. B. Lippincott & Co.
- Govinda Sámanta, or, The History of a Bengal Ráiyat. By the Rev. Lal Behari Day, Chinsurah, Bengal. Macmillan's popular novels. Pp. 383. Price \$1.00. Macmillan & Co., New York.
- My Danish Days. With a glance at the history, traditions, and literature of the old northern country. By G. W. Griffin, late U. S. Consul at Copenhagen. Cloth 12mo., pp. 297. Price \$1.50. Claxton, Remsen & Haffelfinger, Phila.
- The Natural History of Man: A course of elementary lectures. By A. de Quatrefages (translated by Eliza A. Youmans). Popular Science Library. Messrs. Appleton & Co., New York, 1875.
- The Science of Music: or the Physical Basis of Musical Harmony. By Ledley Taylor, M. A. Popular Science Library. Messrs. Appleton & Co., New York, 1875.
- The Globe Dictionary of the English language, etymological, explanatory, and pronouncing. Illustrated by five hundred engravings on wood. Price \$1.50. Estes & Lauriat, Boston.
- Half-hour Recreations in Natural History. Division First: Half-hours with insects, in twelve parts. Part VI.: the population of an apple tree. By Asa S. Packard, Jr. Pp. 32. Price 25 cents. Estes & Lauriat, Boston.
- Half-hour Recreations in Popular Science. Dana Estes, Editor. No. 14: The Glacial Epoch of Our Globe. By Alexander Braun. Pp. 40. Price 25 cents. Estes & Lauriat, Boston.
- Eating for Strength. By M. L. Holbrook, M. D. Editor of the "Herald of Health," etc. Price \$1.00. Wood & Holbrook, 13 & 15 Laight street, New York, 1875.

A Maintenance of Health. A medical work for lay readers. By J. Milner Fothergill, M. D., M. R. C. P. Cloth 12mo., pp. 366. Price \$2.00. G. P. Putnam's Sons, New York, 1875.

Domus Dei: A collection of religious and memorial poems, by Eleanor C. Donnelly. Published for the benefit of the Church of St. Charles Borromeo. Cloth, gilt edge, pp. 106. P. F. Cunningham & Son, Phila.

Fifth annual report of the Board of Commissioners of Public Charities of the State of Pennsylvania, to which is appended a report of the General Agent and Secretary, transmitted to the legislature February 18, 1875.

Narrow Gauge Railways in America; embracing a sketch of the rise, progress and success of the new system, etc., etc. Illustrated. By Howard Fleming, 216 South 4th street, Phila.

An analysis of the life form in Art. By Harrison Allen, M. D., Professor of Comparative Anatomy in the University of Pennsylvania.

THE
PENN MONTHLY.

JUNE, 1875.

THE MONTH.

THE ripple on the peaceful ocean of European politics has been caused by a discussion between Germany and Belgium, in which England has taken no uncertain stand. Bismarck has threatened the Ultramontane ministry of the neutral Orleans-governed Belgian kingdom with his mighty displeasure, if it does not at once take sides with him in silencing the Bishops within their limits, as he has already silenced those under his own control. The *Pall Mall Gazette* not unaptly suggests, that the great Prince Chancellor makes a mistake in giving the pastorals of the Belgian priests the efficacy of a steam ram, while he shows his characteristic ardor in putting the Belgians on guard against a threat of attack, which is really meant to be a warning to the other and greater powers of the same faith. The House of Commons has reminded the Ministry of their duties towards Belgium, and the Premier has come forward boldly with his declaration, that the neutrality of Belgium is still maintained and to be maintained by the moral and material support of its ancient ally. In Belgium itself, the Ultramontanes are rather strengthened in their somewhat doubtful control of the government by Bismarck's attacks, and the Liberals are discouraged to find their own weapons turned against them. The independence of Belgium was always their cry, when France, under Napoleon the Third, threatened their exist-

ence. Now the Catholic party find their best support in the necessity of maintaining the right of free speech to the Bishops, who in earlier days did their best to silence the Liberal element in the Belgian non-Catholic universities, and Protestant England seconds their claim to speak their minds in support of the Pope, all the more because Bismarck wants them to keep the peace. The existence of Belgium as a neutral power is of itself annoying to Germany, and having secured the alliance of Italy and Austria against the Papal pretensions, having silenced France and neutralized the rest of Europe, it is hard for Bismarck to see the Belgian government, strong in its position and backed by England, able to hold its own against the threats or intimidations of the foremost man in the politics of the day. The church question has hitherto been the one point on which parties in Belgium have fought for supremacy. Matters of internal government have hitherto been regulated with a strict regard to the material interests of the country, and, under a wise financial administration, manufactures and commerce have made Belgium one of the most successful trading communities of the world, a rival of the great iron industries of Great Britain, and a successful competitor with our own locomotive builders. If Bismarck had been content quietly to support and encourage the Liberals in Belgium, they might, by their strength in the great towns, have again secured a majority in their Parliament, and the control of the Government. Now their leaders are foremost in urging their rivals to strengthen themselves in power, by standing up stoutly for their independence of all foreign interference. The Bishops are likely to talk in louder strains than ever of the Pope and his sufferings at the hands of the German Chancellor, and Peter's Pence will flow in more freely than ever from the Belgian faithful, while the Liberal Catholics will be forced to keep silent, lest they should appear to be allied with Bismarck in his attacks on their neutrality.

EVEN the *Times* believes in the reports of new demands made by Germany upon France, and sees the chances of war in the efforts of the French government to maintain its independence. With all its home business still occupying it, and with the diligent efforts of Germany to repress the Pope and to find new allies

in its crusade against the Ultramontanes, the Berlin Cabinet thought it well to give officious, if not official, intimation to France, not to forget that the growth of the German army was keeping pace with that of France, and that if there was too rapid a recuperation in the beaten Republic, the victorious Empire would save itself another war by making its demands for more territory and more money well in advance. The threat is, however, no doubt directed to the flagging allies of Germany in its advance upon the spiritual throne in Rome, rather than upon its ancient enemies. Italy has apparently renewed something of its frequent offers to the Pope of a reconciliation. The meeting of the King of Italy and the Emperor of Austria is to be followed by a visit of the Crown Prince of Germany to Austria and Italy. France not only sees the crowned heads, who were once glad to be guests in Paris, hob-nobbing together in capitals which were made and allowed to exist only by the grace of the French Emperor, but it finds itself the target for threats which it can neither repel nor reply to. The lesson of using the press to warn and to intimidate was first taught by Napoleon the Third, but the Germans have improved on the original; and without themselves appearing in it the Government says and does things which are in the highest degree offensive, alike to France and to the rest of the European powers. It cannot be pleasant for England, with its proud and honest boast of a free and untrammelled press, to see Berlin cleverly travestying the Paris and London organs of public opinion, and inspiring their correspondents in Berlin with sentiments which it would never do for the Government there to express. None the less do the readers both at home and abroad see through the transparent disguise, and recognize in the hand that guides the independent editor the same *main de fer* that rarely uses the *gant de velours* in its own correspondence. Do what France may to restore its self-reliance and to renew the faith of its people in the future by preparing for the war of retribution, which all the world believes inevitable, and half the rest of Europe hopes successful, Germany is always watchful and threatening. Not content to throw down the gage to the Belgian Bishops, and thus to silence all their allies in France, Bismarck turns over to his inspired editors, as well those of the nominal opposition as of his friends, the grateful task of giving timely

notice to all recalcitrant German powers, that their hopes of being strengthened for a fresh war with France may as well be laid aside. Germany means to render hostilities in the future impossible, simply by keeping its French victories forever free from any oblivion. If the outside world begin to see signs of improvement in France, a nod from Berlin will soon undeceive Frenchmen, and awe them back again into peaceful reorganization.

THE great captain of the small host of French Free-traders has tickled the ears of his Liverpool hosts by gloomy vaticinations as to the future, not only of the United States, but of the Centennial, if this country persists in resisting the blandishments of Free Trade. Not caring to look at the actual experience of France itself, which owes its success in time of peace to a protective tariff, and its ability to recover from the effects of a devastating war by an increased protection to its native industries, M. Chevalier, with the coolness which characterizes his school of hard-edged logicians, shakes his locks at the melancholy example of the United States, and bids it pause in its career of manufacturing greatness, to return to a purely agricultural state, so that England may again find a market for its products. The voice of the French champion of Free Trade is heard to its loudest tones on English soil; and from Liverpool, with its Exchange full of men eager for American buyers, he seeks to persuade us that the protection which has been balm and strength to France, is only a bane and injury to the United States. Following the French philosopher comes Mr. John Bright, his great manly voice enfeebled by bodily decay and mental disappointment, who earnestly warns his English hearers not to tempt their American rivals to still greater advances in their manufactures, by taking part in the Centennial Exhibition. Fortunately the prospect is that, in spite of these doctrinaires, foreign countries will send their best wares to the great World's Fair in 1876.

ONE of our graceful and facile poets wrote some pleasing verses, entitled "Hooker's Across;" but by the time they got into print, Hooker was back again. "Captain" Boyton expected to have his passage celebrated in equally heroic measure, but unluckily for him the days were too short, and the pilots too

cowardly, and the steamer took the would-be Leander safely aboard long before he had gained his harbor. The newspaper management of the business was very clever indeed, and even the Queen was dragged into a sort of patronage of a scheme which is of little or no scientific value, and of doubtful benefit for any life-saving purpose. The awful news of the loss of the "Schiller" on the Scilly Isles, with its hecatomb of victims, is of itself a lesson that teaches us of how little avail are all individual appliances or safeguards in the presence of the actual horrors of shipwreck. The overflowing bounty and benevolence of the English mercantile and sea-loving people, are at the beck and bid of every adventurer who promises to save the lives of seafarers. Now, however, all eyes will be raised to the Government, to see what action will be taken to prevent the recurrence of such disasters as that of the "Schiller." Long years ago Sir Clondesly Shovel, an English naval hero, was lost with three men-of-war on the same dangerous coast; and now, with all the aids of modern science, light-houses, fog-bells, and other sea-coast protection, a great trading steamer goes to the bottom, and a mere handful of survivors are left to tell the tale.

NOT a little newspaper self-congratulation has been indulged in on the strength of the decree of the United States Court in Baltimore, condemning the "Edgar Stewart" for her infraction of neutrality. We do not desire in the least to detract from the great merit of one of our Judges in doing a right thing, but we fancy that no right-minded Judge likes to be told that he has done well, because he disappointed a well-founded expectation that he would rather yield to a supposed public opinion than administer the law. Now we don't believe there is any public opinion in favor of doing things in violation of the law, no matter how much sympathy we may feel for Free Cuba. We do believe that our Judiciary generally is honest in the highest sense of the word. Independent we know the Federal Judges are, as of right all our Judges ought to be, by their life tenure, and the people are vastly more anxious to see the law properly administered than to show their opinion about Spanish misrule. There is, of course, a satisfaction in pointing to the action of the Court at Baltimore, as a proof of the ability of at least that branch of our Government

to do justice. We hope, too, for better things in the law offices of the Government, now that Mr. Williams is happily no longer in it, and with Mr. Edwards Pierrepont we are satisfied that the Department of Justice will itself be foremost to lay down the law as it is, and not as any temporary incident may tempt its officers to want to mould it.

ON the 27th of last month a number of admirers of Mr. Carl Schurz, from different parts of the United States, gave him a dinner in New York prior to his departure for Europe for the summer vacation. This manifestation of approval of his public career by men of the character of those who gave the entertainment, and who belonged indifferently to both political parties, was an unusual and most complimentary tribute to Mr. Schurz. The past lives and positions in the community of most of his hosts rendered their endorsement of special value, and thus tendered at the termination of his public services, it must have been peculiarly gratifying to him. It was distinctly announced beforehand that the dinner was to be in no way of a political character, but simply a mark of appreciation of the personal and public worth of the man, and with this understanding there gathered together representatives of various pursuits in life, and of every grade of political opinion. Differing widely with Mr. Schurz as numbers did as to many of his well-known political views, they readily united upon the basis of gratitude to one who had displayed honesty as a politician and faithfulness to the whole country as a Senator. In these days it is something refreshing to witness services of this character rewarded and praised. We have seen earnest and unquestioning partisanship compensated by foreign missions and fat offices at home, even after the seal of condemnation has been placed upon the appointee by his constituency, and the exercise of honest independent judgment punished with contumely and disgrace; and since the time when Sumner's refusal to assist in annexing Santo Domingo lost him the place which long years of service had made his almost by prescription, and for which the labors of his life had rendered him peculiarly fitted, the party precedents have established it as a fact that slavish submission to party is statesmanship, and that the only chance of political advancement lies in obedience to caucus rule. It is pleasant then, we repeat, to

see such an assemblage as met in New York to honor Mr. Schurz, offering to a retiring public official, shorn of all power and influence, this expression of the esteem and gratitude of the people for the example which he has set of fidelity to the public trusts confided to him, which he now returns unsullied to his constituency. It must be curious to Mr. Schurz to reflect upon the changes the years have brought about to him and his native land. An exile, fleeing under fear of imprisonment from Germany to unknown shores, he returns, after a quarter of a century, a highly honored and famous citizen of the home of his adoption. In that short time he has achieved the highest rank attainable by one of foreign birth, and even in political defeat has received a recognition of his services and an expression of regret at the country's loss in his absence from the Senate chamber of which any one might justly be proud. His is a useful and much-needed example of the fact that still in American politics it may be possible for a man to get on, to get honors, and be honest.

THE reconstruction of Judge Kelley has excited comments in the newspapers, and the vials of wrath of all the party journals have been poured upon his devoted head in consequence of his statements with regard to the absurdity of the stories of outrages, past and imaginary, in the Southern States. To differ with the administration upon such a vital question as this was made during the last Congress, and to confess that he regretted more than all his other legislative acts his vote for the "Force bill," must have awakened a dread in the minds of the faithful that no man can hereafter be trusted. It is gravely asserted that the Judge's statements must be untrue because he was actually prevented by the mob from making a public speech in Mobile in 1868. Assuming that the entire Southern population was present on that occasion and took part in that riotous behavior, it might still be suggested that the seven years which have changed Judge Kelley's views on many political questions may have reformed the population below the Potomac, and that now the voice of Kelley might be heard in that part of the land without danger to his person. At least it is evident that he believes so, and that he regrets having been seduced into lending his name and influence to the attempt to perpetuate party and personal power at the expense of the Constitution.

MR. ATTORNEY GENERAL WILLIAMS retires this month from the Cabinet, and his place has been supplied by the Honorable Edwards Pierrepont, of New York. We believe that both these events give satisfaction to the country. In Pennsylvania the pleasure felt at the removal of Mr. Williams and the appointment of his successor, is alloyed by the feeling that this State has not been fairly treated by the administration. Her services have been so great in twice deciding what appeared to be an extremely doubtful political contest, and her position in the coming campaign is of so much importance, that it was thought the compliment would be paid her of placing in the first vacant seat of the Cabinet one of her citizens. There are of course certain men who assume, by their careers, positions so national that their elevation is proper, irrespective of territorial limits; but when this is not the case it has heretofore been the custom to acknowledge State boundaries and political supremacies in the distribution of Cabinet offices. New York has already a national minister, and has just overturned a republican administration. Under these circumstances, and admitting, as will doubtless be admitted, that neither Judge Pierrepont's abilities nor public services are of the pre-eminent order above referred to, and that his equals, at least, can be found here, it would have seemed proper that Pennsylvania should have been recognized. Nor is Judge Pierrepont's political record indicative of such slavish adherence to the party as to mark him out for preferment; for he has acted with either party on various occasions during the last few years, and has already been rewarded by the President with the United States District Attorneyship at New York City. Pennsylvania is, however, a patient State, and having endured many other slights, may perhaps regard these no more than the others. In fact, she is chiefly to blame herself for the little weight she possesses in the counsels of the nation. It was well said by Mr. Evarts at the Schurz banquet that the prominence of a State depends upon her representatives. In his early youth and manhood he said there appeared to be only three States in the Union, Massachusetts, Kentucky, and South Carolina; but when Webster, Clay, and Calhoun died, men noticed that little more was heard of Massachusetts, Kentucky, and South Carolina. By their fruits are the different States best known to the country; and when a great city and a great State fail through a long series of years

from any cause to do justice to themselves, they cannot expect political parties or the nation at large to do them honor. As of a man, so of a community—we are accustomed sooner or later to take both without much inquiry at the value which they put upon themselves.

THE course of true love never did run smooth in political, any more than in private life. Here is Spinner, who was so strong in the affection of Lincoln and of Congress that he never could get his resignation accepted, now coolly bidden to send in his farewell, and leaving office with far less courtesy than was shown to "Tom" Murphy or "Aleck" Sheppard. In brief, Congress adjourned and the Senate out of the way, the Presidential axe is swung around in a lively way, and the head of one of the oldest, most honored and most trustworthy public officers ever in the service of the government, is taken off with no word of reason assigned, no letter of sympathy, no farewell or God-speed bidden to the man through whose hands millions of the national funds have passed. A plain, blunt, rough man, with a strong gift for taking upon himself the responsibility, and a bold readiness to meet Congress or any other invader of the rights and duties of his office, he is turned adrift, to strengthen the main chance in Indiana; and the official press, in its subservience, says no word of cheer or comfort to Spinner, while the opposition, all too timid and chary of praise to an old-fashioned Republican, has no time or space for regret at the loss to the public of one who has so long and so well served the country. Douglass has gone as he came: a breath of favor made him, and a rough blast of ill-wind has displaced him, with no reckoning of his services, good or ill; and as he was chosen without regard to his fitness for the office, so he is turned adrift only to make place for a man whose qualifications are, if possible, fewer than those of his predecessor. Surely there must be a retribution for such utter falsification of all President Grant's pledges in and to Civil Service Reform. It cannot be possible for the country to have faith in the robust strength or honesty of Mr. Bristow, or of his promise to manage the Treasury only in the interests of the public, when he sees his Treasurer turned adrift, and his Commissioner of Internal Revenue succeeded by a man of whom nobody knows any good, who has no sort of relation to

the office or experience in its duties. The picture of Congress emptied upon the public offices of the country is indeed a lamentable one. Orth and Maynard are as little likely to represent the country abroad with honor, as New and Pratt are to be counted on to bring any special fitness to its service at home. The roll of unsuccessful Senators and Representatives, turned loose and shorn of their legislative honors, passing before the President's eye, was too much for his sympathetic heart, filled as it is with his wealth of grateful friends; and so he picked out the lame, the halt, the blind—at least all that were not blind to the possibility of a disagreeable time of it in the course of the next Congress, when investigations will be the order of the day, and when straightforward men like Spinner would be undesirable people in office; while the robbing Pennsylvania of her poor little Revenue Commissionership would be a suggestive snub to those who allowed her convention to adopt a platform with a plank against the Third Term.

THE questions between the owners and miners of coal and the operators still remain open, and, apparently, as far as ever from settlement. The return of the militia sent from Philadelphia has been followed by a fresh series of outrages such as the presence of a well-drilled body of soldiers seemed able to prevent. The fact that the owners of a great mining district are prepared to drown out their mines rather than yield to the demands of their laborers, is one of the most significant of all the interminable series of questions to which no answers can well be made. The absence of any responsible body of arbitrators or of officers to represent the Executive of the State, leaves the dispute still a mystery, to which no solution can be given by the anxious consumers. A coal famine is almost at hand, and yet our wealth of mines and of miners is paralyzed by the firm stand of the two great associations representing the contending bodies. The feeble attempt at legislation on the subject last winter was properly stifled at its birth. There is no need to seek a remedy for existing evils by a law so drastic in its character as practically to amount to a confiscation of the property of the mine owners in the interest of the miners. A properly constituted Board of Arbitrators, or a Court of Conciliation, representing all interests, would long ago have put a stop to

the decision of a matter of such vast importance by the present appeal to force. The Legislative Committee now sitting in Philadelphia, to consider the conduct of the Reading Railroad and its management of its mines, is of such doubtful constitutional right of existence, and is so clearly governed by personal antipathies to the great corporation, that its results and its decision will carry little weight.

It is gratifying to find, in the organization of the Penn Club and the Social Art Club, that the intelligent people of Philadelphia have taken a step in the interest of literature and art which is likely to lead to very valuable results. Just as England, in a day when the culture of her educated classes was at a very high point, acquired the title of a nation of shopkeepers, because that culture had not yet reached out in earnest to educate the masses of her people, and to infuse intelligent life into her art-industries; so in our own country we might now justly be called a nation of housekeepers, because, as a rule, we shut up within the four walls of his own house, or at best within the restricted limits of his own circle of immediate friends, the intelligence and culture of the student in letters, and the treasures of the collector of works of art. And the reason why the good influence of this culture and of these works of art, as an educational means, is not felt by society at large, is chiefly to be found in the absence of some kind of association of those who are interested in the same kind of subjects, and have been working over the same ground. So that these two clubs will not only be of value for the pleasure and profit they will bring to the members, but they are sure to be of great practical use to the community, by drawing out and giving expression to many things in literature, science, and art, which will tend to increase the real culture of our citizens, and to improve the art-industries of our city.

The Penn Club is to a great extent the natural outgrowth of the Penn Monthly Association, and arose from a mutual wish on the part of that association, and of the friends of the Penn Monthly to form an organization composed of those who contribute to its pages or are interested in the subjects treated there, which would afford a means of social intercourse, in an informal and inexpensive club, of those engaged in literary work, and those interested in

the promotion of the objects which the Penn Monthly has in view. By bringing together men of culture in our own and in other cities, who otherwise would perhaps only casually meet, such an association, composed of men united in common interests and with common aims, must exert an influence of generous, healthy culture upon our citizens.

The Social Art Club is intended to cover a different ground—the promotion of Industrial, Decorative, and Antiquarian art. It is the result of a movement commenced in Philadelphia some years since, in the formation of a society for that special purpose, looking towards the establishment in our city of a museum of art, similar in character to the Metropolitan Museum of Art in New York, and having in view the same purposes which have been so successfully accomplished in England by the South Kensington Museum. As it was found that some time would be required to develop a general interest in the subject, the original design was abandoned for the time, and a club of twenty-five was formed, under the name of the Social Art Club, for the purpose of increasing as far as possible an interest in the matter in hand. The members met once a month at the house of each of their number in turn, a short paper was read upon the subject chosen for the evening, which was also illustrated by such examples of works of art as could be conveniently collected on short notice, and in a private house. The present Art Club is practically an enlargement of the former club, the design being to carry out by means of a social club the purposes which have been in view from the start; to provide opportunities for more extensive loan collections, and to make provision for the gradual formation of a permanent collection of works of art, which will form a nucleus for a museum of art in the future. Apart from the advantages to those immediately concerned in it, the importance of this movement in its practical bearing upon our art-industries is very great; for museums of art are indispensable aids to a complete and satisfactory instruction in design as a part of the curriculum of industrial art education. So that it is not only that the taste of the people is improved by these means, but an increased money value is given to our manufactured products. For all those manufactures into which design enters at all, depend largely upon good design for their success, and what we now have to import

from abroad at an enormous expense, we could produce at home, if we had the means at command to make our schools of design as thoroughly efficient as those of Europe.

The establishment of these two clubs at this time is especially important in view of the valuable service they can do at the time of our approaching International Exhibition. When the "friendly invasion" comes, we shall have in our city not only men distinguished in literature, science and art, but also the best examples of the art-industries of every nation of the world, and it will be the duty of the Penn Club and the Social Art Club to see that none of these go away from our city without leaving a lasting influence.

ELECTRIC PHENOMENA IN THE ROCKY MOUNTAINS.

NUMEROUS are the surprising views and unaccustomed scenes that greet the traveler in the Rocky Sierras. More than once during his journey must he hesitate, and recall to his memory the explanation of phenomena he has been familiar with from books only. The very character of the country he traverses, the singularly somber and melancholy aspect of the scenery that he so frequently meets, must leave the impression upon him, that he has seen more there, than perhaps after many months travel in other countries. While crossing the plains, that great lake of the tertiary period, the siren of the desert, the beautiful *fata morgana*, presents itself. Where nought but sand and sage-brush can thrive, where even the fleet antelope passes hurriedly, he sees the most invitingly cool lake, the often fatal reflection produced by that heat which he seeks to avoid. At other times, as in *Tantalus'* trials, a shady brook will appear, a few miles distant only to his eye, but the day may be spent before it is reached. A small projection, a bush, or a slight elevation of the ground, may be pictured to him as a house or some other place of comparative comfort. Leaving the plains he leaves the mirage. No dangerously treacherous pictures of beauty in nature, will cause him to regard every slight change of surface with suspicious curiosity. The mountains are stern and forbidding, but they are true; they look

uninviting, and they are so. The orographical aspect, however, changes greatly with the geognostic formation, and true to her own laws, nature herein furnishes some clew to the secrets she so carefully guards with her most invincible army, her mountains.

These lines shall speak mainly of the ranges that traverse Colorado; ranges that thus far geographers have tried in vain to reduce to some definite series of systems. Taking a very general view of the mountain chains, it may be observed that two directions predominate, the one parallel to the longitudinal axis of our American continent, the other crossing it at almost right-angles. Geological research will eventually clear up to a great extent conflicting questions relative to these systems, and until then geographers must content themselves with that knowledge gained superficially only. It seems that the North-South systems mainly owe their formation to an older upheaval of the granitoid and schistose rocks, while the transverse systems were produced by the younger volcanic eruptions. Volcanic eruptions, from old associations, are always accompanied by the idea of more or less local phenomena. This will hold good until the explorer reaches the North American West, where thousands of square miles in continuous areas are covered by rocks that have burst forth in a molten, liquid state.

To nothing can the character of these mountains, the result of enormous changes in the interior portions of the earth's crust, be better compared, than to the fearfully grand spectacle of a stormy sea—monotonous in the repetition of similar forms, yet impressive and subduing when viewed as a whole. Chiefly dark shades are found here, varied at times by local alterations presenting the most beautiful modulations from white to yellow, orange, red, brown, and then deepening again into colors more in conformity with the general aspect. Above a certain line of altitude (varying with latitude) nothing will be found, save the loose debris of those formations that have been gradually crumbling under the destructive hand of long-continued atmospheric influences. Certain localities show grassy plateaus above timber-line, but these must be regarded as exceptions.

It was while traveling through regions of this description that electric phenomena were observed, novel as dangerous in character, but possessing a fascination, apart from their scientific

interest, that was increased perhaps by the uncertainty attending their final development. Circumstances combine at the locality of observation (South-western and Southern Colorado,) singularly favorable to the study of condensation of vaporous and concentration of electric elements. To the West and South broad plains, slightly corrugated by narrow bluffs and ridges, stretch along the base of the mountains. East and North lower hills, with interpolated valleys and plains, help to complete the isolation of a dense mountain group, covering nearly 5,000 square miles. While the neighboring plains are hot and dry, permitting the clouds to float at a considerable elevation above them, which, although exceeding 4,000 to 5,000 feet, will barely reach the summits of the adjoining peaks, condensation and precipitation will take place shortly after they have reached the colder, mountainous regions. Under conditions so well adapted to the study of the formation and progress of storms, the rainy season was spent by a party of three during 1874.

Ascending high peaks may be invested with a charm that was born and bred in highly-civilized Switzerland ; but there, where mountain climbing is reduced to almost a science, the rough and ready ascent of a western explorer might not be appreciated. Nevertheless, although not executed in perfect accordance with the established rules of carrying ropes, hooks, ladders and other cumbersome appliances, our pioneers do succeed in reaching the summit of many a peak that would require almost an army of guides for the Swiss tourist. Where the circumstances of either travel or work of a definite character demand the least possible delay in executing all the physical labor required, the talent of these adventurous men shines in its brightest light.

Early in the morning, long before the sun had risen, the cheery "roll out," "roll out," of the cook is heard, and one hour later the tents have disappeared, the mules are saddled, and armed with surveying and other instruments a small party of three set out for their day's trip. Some neighboring peak is their destination. No delay that can possibly be avoided is indulged in, and usually by ten o'clock the members of that party find themselves at a point where riding animals can go no further. The remainder of the ascent is on foot. After the summit has been reached, frequently an elevation of more than 14,000 feet above

sea-level, a hasty survey of all in view is taken, the familiar points recognized, the instruments are arranged and adjusted, and the occupied station located. Should the weather appear sufficiently favorable, no hastening of the work is required. But from a distance there appears a dark cloud approaching, every moment growing larger and darker. Soon the sound of thunder can be distinctly heard, and the characteristic falling of rain is seen, as if the cloud were drawn down in shreds by invisible hands. Soon a few scattering flakes of snow or small hailstones begin to fall, and the surface over which the ominous cloud has passed is perfectly white. This is an opportunity for studying the progress of storms, together with their lateral limits. Little time remains, however, before the observer will be enveloped in a mass of impenetrable mist, and every moment becomes precious.

While in a reclining or sitting posture, no apparent demonstration of the presence of electricity in considerable quantities may be felt. During the earlier portion of the season such demonstrations—as described below—were so frequent, however, that no reliance was placed upon negative evidence of that character. As soon as an erect position is assumed, the rising of every hair on the head and face, accompanied by the unmistakable tingling sensation, apprises the observer of the beginning of a phenomenon that might terminate to his serious disadvantage. The proverbial “rising of the hair” is carried on to an uncomfortable degree, and soon stinging pain, not unlike the illegitimate application of a pin, will be felt in various portions of the head and the back of the neck. Holding the hand up into the air will then usually give rise to a buzzing sound, which resembles—although by no means an æsthetic comparison—the noise produced by frying bacon. Should only one finger be extended from the hand, and the sound be weak, it will frequently cease altogether upon holding up two, provided their points are placed some distance apart. This is the case also with more than one or two fingers. If the exchange of electricity is not a severe one, the lowering of the hand may create a complete cessation of the noise. The cloud that has been the scene of frequent discharges of electricity already in the distance, is approaching before the wind, the quantity of the fluid present becomes greater, and its effects more decided every moment. Soon every projecting object upon the person of the

observer will begin to hum, every button and instrument he may have about him joins in the monotonous concert. The pencil with which he is taking notes sings a song of its own, but can be persuaded to stop by removing it from its approximately vertical position. Thus far there is no danger. Before long, though, the situation becomes more uncomfortable; the quantity of electricity present increases, and with it the annoying musical (?) performances. All the pointed rocks in the vicinity of the summit and along the sharp ridges leading from it, every hair, begins to buzz with a sonorous voice. That which is usually regarded as dead, suddenly appears to have come to life. Any object of certain length, such as a tripod or rifle, when held upwards, serves as a lightning-rod, and frequently the holder receives a shock that he rarely desires to have repeated.

Were the conditions at hand to produce perfect insulation, the experiments would be by far more interesting; but even with only a partial one, produced by placing clothing under the feet of the electrician, sparks of two inches in length could be obtained from a rifle. At this point of progress it becomes necessary to watch the storm closely, if possible. The amount of electricity increases to such an extent that it becomes almost unbearable, and a more cumulative discharge may be expected momentarily. Single puffs of wind increase the strength both of the humming and the shocks, so its direction serves as a guide. When the intensity has reached a very high point, to measure which was impossible under existing circumstances, a discharge of lightning, striking probably a very near peak, takes place, and with it temporary relief. As soon as the flash has occurred, the noise ceases, the tingling in head and hands is no longer perceptible. But this calm is by no means stable. If the wind continues from the direction where the last visible discharge was observed, it may be deduced with great probability that the next one will reach either a point in close proximity to, or even the one occupied. Very soon a repetition of the accumulation of electricity takes place, manifesting itself as described above. Should the conditions regarding the direction of wind and progress of storm be fulfilled as given before, it is high time to leave the peak, and more than once the observers barely escaped without the loss of their instruments. As soon as the time for departure has come, everything is taken

up in haste, and the descent accomplished in less time than under many other circumstances. In preference to any other direction, the steepest side of the mountain is chosen, avoiding ridges, because there—next to the summit—the discharges are heaviest. It will rarely be necessary to climb down more than thirty or fifty yards, and upon arriving at a point where the humming is no longer accompanied by the stinging pain, halt is made. Along a sharp ridge large quantities of electricity have been noticed more than 400 feet below the summit. Often all the unwelcome effects may at the halting place be obviated by lying down, remaining in such a position until the storm passes beyond the immediate vicinity. While thus waiting for the further development of events, either a very near point, or the one just abandoned, will be "struck," and the main quantity of electricity is carried on further. Again the ascent is made, the instruments once more put up, and the retreating cloud watched from a position that may now be considered safe. Excepting a dull headache, that generally lasts for several hours, no serious effects are felt by the observers. Before long, all the evidence of one of nature's most beautiful but dangerous phenomena has vanished in the distance, save the white stripe that marks the storm's course.

Not at all times, however, are the conditions thus favorable to the three explorers: the storm may not continue its onward course, and the station must be abandoned either for the day, or for the season, if time does not permit a second ascent. If comparative familiarity with these fascinating demonstrations of electrical action enables the observer to predict with a considerable degree of accuracy the desirable time for leaving, there is no, or little danger. On the other hand, it might result in the loss of life.

On the tops of high mountains, the bare rocks may not unfrequently be found to exhibit numerous glazed portions, resembling in shape the inner half of an irregular, compressed tube. Analogous to the "lightning tubes" of our sandy plains, and other similar localities, this glazing has been produced by the electric discharge, melting the surface of the rocks. Such evidences were found to be quite numerous at certain points, and show that the summer of 1874 was not one unusually rich in the occurrence of phenomena just described.

During 1873 a number of high peaks were ascended by the

same party, and three times electricity of this character was encountered, while in 1874, during the months of July and August, it was observed five times, mostly inducing the members to leave their station. Frequently the presence of electricity was noticed when the main storm passed within a short distance of the occupied point.

Identical and similar observations have been made both in the Rocky Mountains and in other regions, and abroad,—more particularly, in the latter case, at artificial elevations; but they do not seem to reach the intensity of those from which the above description is taken.

The ordinary traveler, unless especially favored, will rarely have occasion to confirm by personal observation, the details that were so frequently noticed. In cloudy or unpleasant weather the professional tourist will scarcely attempt the ascent of a mountain from which he can promise himself a grand view on a clear day. Unless he be surprised by one of those storms that often hover for days over some very compact group of peaks, and suddenly turn with the rising wind, he will miss the most novel and interesting experiences that the western explorer enjoys.

FREDERIC M. ENDLICH.

LAW REFORM.

The necessity of securing some measure of uniformity in legislation on such matters as Bills of Exchange, Foreign Judgments, Copyright, Patent Law, Trade-marks, all common to a variety of countries, has led to the formation of an association for the purpose. It was founded in Brussels in October of 1873, and it has already done a great deal of work both in these special subjects and in the larger field of public law, under such heads as Arbitration, Maritime Prize, Extradition of Criminals, etc. The next annual conference will be held at the Hague in the first week in September next, and as a preparatory step, a set of circulars has been issued, showing the general purpose and scope of the association, and including a number of questions to commercial authorities, requesting their opinion as to a uniform system of

laws as to Bills of Exchange. We have received a request to give further publicity to this project of reform, and we do so with pleasure by printing the circulars in full, so as to show exactly what the association propose doing. The services rendered in so many directions by international coöperation, show how well the labor of the association can be directed to the important subject of Law Reform in Mercantile matters; for commerce will advance enormously between nations, if it is made certain of the uniformity of laws that govern its transactions among civilized countries, instead of being, as it now is, the victim of contradictions and incongruities beyond any explanation.

A meeting to prepare for an American representation at the Hague was lately held in New York, under the Presidency of Mr. Woolsey, the leading authority on the subject in this country. We trust that our Boards of Trade will also take action in the matter.

ASSOCIATION FOR THE REFORM AND CODIFICATION OF THE LAW OF NATIONS.

The association was founded in October, 1873, at Brussels, by a number of Jurists and others, who then formed themselves into a society for the reform and codification of the law of nations. It has since been joined by many distinguished men, both in Europe and America.

Its objects, as its name indicates, are to arouse attention to the difficulties which prevail through the conflict and variance, in and between different countries, as well of public international law as of the laws affecting private rights, with a view to promote assimilation and uniformity in matters susceptible of such treatment.

The subject necessarily divides itself into the two heads of "Public" and "Private International Law."

The first head involves matter such as arbitration, maritime prize, extradition of criminals, and other similar questions. These, under the auspices of our general secretary, and some of our body who have devoted special attention to their consideration, will form an important part of the subjects for discussion at our next annual conference.

The second head embraces so vast a number of questions that it was, at the last conference, determined to direct attention primarily to the following subjects: 1. Bills of exchange; 2. Foreign judgments; 3. Copyright; 4. Patent law; 5. Trade marks. The consideration of the existing state of the law in different countries on these questions, and the best plan for adopting some systematic mode of obviating the conflicts existing with regard thereto, was then entrusted to a special committee nominated for that purpose.

This committee has, after mature consideration, felt the necessity of devoting attention to these subjects one by one.

In the belief that no question affects so large a section of the commercial community as that of Bills of Exchange, and that public opinion is already ripe seriously to consider the importance of the assimilation of the laws and practice relating thereto, this committee have determined that its first efforts should be directed to the best mode of bringing about a uniform system of law and custom in regard thereto.

With a view of preparing some practical measure to carry out such uniformity, the council feel it essential to seek the opinions of chambers of commerce, bankers, jurists, and others in various countries, alike as to the difficulties now found to exist, and the best method of providing a remedy.

In order to elicit such opinions we have, by direction of the council, accordingly framed and now beg to submit to you a series of questions, with the request that you will favor us with your views and suggestions.

The great importance of the object to the commercial world will, we feel assured, commend itself to your attention, and the council trust that, in addition to giving the benefit of your own experience, you will kindly still further assist its efforts by obtaining the opinions of other gentlemen of your town and district.

Branches of the association have already been established in France, Belgium, Italy, and the United States, and nothing will further the object of the society more than the formation of other local branches and committees in correspondence with the association.

Other questions, equally important with those already alluded to, will necessarily have to be dealt with in due order, and as this association desires to become a centre for the intercommunication of opinions bearing on subjects of international law generally, the council will gladly welcome any communication with reference to any of its objects, and invite your active co-operation and support.

We have the honor to subscribe ourselves,

(By order of the Council)

H. D. JENCKEN,
Goldsmith Building, Temple, London.
J. RAND BAILEY,
8 Tokenhouse Yard, London.

} *Honorary
International
Secretaries.*

The next annual conference will be held at the Hague, in the first week in September next. Communications relating thereto may be addressed to the Honorary Secretaries as above, or to G. I. TH. BEERLAERTS VAN BLOKLAND, LL.D., Advocate, (Honorary Secretary for Holland,) 9 Koninginnegracht, The Hague, Holland.

ASSOCIATION FOR THE REFORM AND CODIFICATION OF THE
LAW OF NATIONS.

10 OLD SQUARE, LINCOLN'S INN, LONDON.

Questions submitted to chambers of commerce, bankers, bill brokers, jurists, and mercantile houses in different countries, in order to elicit their opinions as

to the desirability of adopting one uniform system in the laws, usages, and forms as to bills of exchange.

1. Do you find such diversity in the laws, customs and regulations affecting bills of exchange in various countries with which you have intercourse, as to cause complication in commercial business, and create questions of legal difficulty in establishing and enforcing your rights and remedies?

2. AS TO THE FORM OF BILLS OF EXCHANGE.

Do you consider it desirable to adopt one universal form of bill of exchange, and one uniform system of laws regulating the rights and liabilities of parties to a bill of exchange?

3. STAMPS.

What difficulties do you find in the present fiscal regulations respecting stamps on foreign bills, and in the laws relating thereto; and what suggestions do you make for the removal of such difficulties?

4. INDORSEMENT.

Do you consider it desirable to establish one uniform form and system of indorsement, which shall only be limited in case of express directions by an indorser?

5. USANCE.

Do you deem it desirable that the usances now varying in different places and countries should be altogether abolished, and that the adoption of one uniform period of time would be preferable?

6. DAYS OF GRACE.

Having regard to the great diversity of custom, at present leading to great complications, do you consider that days of grace should be abolished entirely, or if not, that a uniform term should be established; and if so, what term?

7. PRESENTATION OF BILLS OF ACCEPTANCE.

Have you experienced difficulties from diversity in the practice, laws, and customs of various countries, as to presentation for acceptance, and the consequences arising on non-acceptance, refusal or undue delay?

Do you consider it desirable that there should be a uniformity of practice, custom, and law in regard thereto?

8. NOTICE OF DISHONOR.

Do you find difficulties in the present system of notice, either as to its form or law, or as to the parties upon whom it should be served; and can you suggest any simplification or alteration in regard thereto, or in the proof of due notice?

9. NOTING AND PROTEST.

Is noting and protest as to foreign bills of exchange compulsory under your law?

Have you in your country any regulated scale of charges on noting and protest? If so, please give full details thereof, both as regards inland and foreign bills.

Do you find that the expenses of noting and protest, and incidental charges on foreign bills returned dishonored, are variable and burdensome; and what changes (if any) in the present system and rate of charges do you deem desirable?

10. RIGHTS AND REMEDIES.

What rights and remedies are, under your laws, secured to a holder of a foreign bill of exchange by due notice and protest?

Is there any limitation as to election of parties, or the time for inception of legal proceedings?

Have you any suggestions to make for the better securing the rights and remedies in other countries of holders of foreign bills?

11. LIMITATION OF ACTIONS.

What is the limit of time in your country in which a suit must be brought, and do you consider it desirable to fix a uniform period?

12. AVAL.

Is the law or custom of aval in force in your country?

Do you find difficult questions arising in countries where no such law or custom exists, and do you consider it desirable generally to adopt a system recognizing the validity of aval?

13. AS TO LOST OR FORGED NOTES OR BILLS.

a. Does the law in your country sustain the right of a *bonâ fide* holder for value of bills of exchange, lost or forged? Is this right upheld even in those cases in which loss is caused by gross neglect, such as a want of due care and caution on the part of a person losing a bill, or from whose possession a bill has been abstracted?

b. What diligence do you deem necessary on the part of bankers issuing circular notes and letters of credit—and of the holders of bills of exchange, to prevent the circulation of lost and forged notes and bills?

c. What alteration in or assimilation of the laws of commercial countries generally do you suggest as a protection to the banking and commercial community in respect of lost or forged bills of exchange and letters of credit?

The above three questions have reference particularly to letters of credit and circular notes, since large frauds are being continually being committed upon, and losses sustained by bankers, money changers and others, either by the production of forged letters of credit or letters of indication, or by passing off lost or stolen bank and circular notes.

It will be sufficient in answering these questions to refer to their numbers, and it is requested that replies be addressed to the Honorary International Secretaries direct, or to the offices of the association, 10 Old Square, Lincoln's Inn, London.

H. D. JENCKEN, Goldsmith Building, Temple, London,	} Honorary International Secretaries.
J. RAND BAILEY, 8 Tokenhouse Yard, London	

INDUSTRIAL EDUCATION.

BY drawing our deductions from past history, the natural laws of increase, and the great attraction our country holds forth to European and Asiatic immigration, we may infer that, at the termination of another century, our population will reach an aggregate of three hundred millions.

Under the influence of less propitious causes than are now at work, our numbers rose with the century just elapsed, from three to forty millions; and should no remarkable fatalities visit us during the coming hundred years, and the same prolific growth that characterized our generation continue, the ratio of increase will hardly be diminished, and eight times our present number may occupy this vast territory.

But few will survive to behold the spectacle the country will then present, as the amazing product of the activity of the American mind; and we can, therefore, but indulge the imagination by contemplating those results as they will be seen in the vast material fabric of our national greatness.

We are told that seventy thousand miles of railroads, and six hundred and sixty iron works, which we now possess, are far in advance of the wants and actual means of our day, and that we have anticipated our future by some years—how many, we cannot as yet, during a financial paralysis, correctly estimate.

Not many generations will have passed away, however, before the railway system will be augmented to half a million of miles, and the furnaces and foundries be enumerated by the thousand. Many thousand, probably, will be in operation, converting our rich ores into iron and steel.

Another large branch of industry will be seen in the manufacture of agricultural instruments, the tools and ever-improving appliances for the reduction of the glebe and cultivation of our vast rural domain; of the steam-engine, in all its varied forms, as well as the turbine wheel, which is revolutionizing the agency of water as a motive power.

The loom and spindle come within the same category. Their product will form a vast figure in the computation of the nation's wealth, and when our three hundred millions will have to be

clothed with the fabrics they are to produce, we may judge to what a gigantic scale of operations the manufacture and distribution of cloths and apparel will be extended. To add effect to machine force, as well as manual labor, we must expect a vast sub-division of labor, which, as the example of other countries shows, increases product and reduces prices.

Indeed, it is more than we can do to picture to our minds, or place in an intelligible form, the culmination of those energies that will animate and keep in motion a self-governed nation, such as another century of time is destined to behold.

The preparatory steps that have hitherto been taken to train the intellects of our people for development and advancement in mechanical, mining and engineering pursuits, have been adequate to our wants; and the fostering care extended by the hand of government has never exceeded the limits of that true and judicious policy, which the wise legislator, having an eye to the preservation of the republic, should ever uphold.

Industrial education, however, under that name, has never been made a subject of legislation; and national enlightenment in the useful arts, which is, in reality, the problem that should fasten our attention, has either been ignored, overlooked, or allowed to come in as incidental to trade and commerce.

If we allow the question of national industrial training in all the operations of manual skill and the development of inventive ingenuity to be synonymous with a nation's growth in knowledge, holding a priority to mere wealth, it will follow that the nurture and increase of our industries occupy far higher ground than the politician or political economist has ever conceded them. We have been told, and the doctrine has numerous supporters, that all the money expended by the people in fostering native industrial talent, with all its emanations of ingenuity, represented in forms of the most remarkable invention mankind has ever seen, has been a mere waste; that the effort to uphold an artificial system of manufactures and the promotion of useful arts, has imposed an unjust tax upon the people, and that all our struggles to obtain a supremacy in manual skill should be stifled in their incipient stage.

On the question in its politico-economical light, it is not our purpose to dwell. We write on national education, and we regard

all present expenditure only as subsidiary to the prospective welfare of our nation. As a fulfillment of the purposes of good government, we advocate the nurture, development and training of our national industry; for this, vastly more than the large accumulation of treasure, will place us in a position to meet all future exigencies. In that gigantic economical system which we have just attempted to foreshadow a century hence, we shall need all the educated labor we now possess, all that we can train during the interval, and all that we can obtain from abroad, to sustain and keep successfully in motion its individual parts; and the preparatory steps for the great scale of operations which is to ensue, should be taken now.

It is a marvelous fact that, though a century of our existence has passed by, such important subjects of legislative thought as the preservation of the forests, game laws, and pisciculture are but on the eve of arresting our attention, and of pointing to the great truth that we live, not for ourselves alone, but to transmit a share of the great prosperity we enjoy to those who are to succeed us.

This new course of legislation is but one of the evidences that the influence of science will and must be more and more felt in our legislative halls, and that some of the profound statesmanship of Europe will have to be copied by us before our republic shall have attained its full dimensions. Equally with the care of the waters, the forests and the game, is it incumbent on us to provide for all grades of scientific culture, whether theoretical or practical. The nurture and protection of labor, let it be viewed in whatsoever light it may by a certain school of thought, is national practical education.

European laborers, who pursue their avocations by an innate impulse that might be viewed as merely physical—the hewers of stone, the delvers into the earth, and all the bucolic race of men—constitute not only a large element of our industry, but, all things considered, whenever they emigrate, they are perhaps the most valuable accession to America.

The best portion of this material flowing in upon us comes from Ireland, Scotland, Switzerland, Germany and Scandanavia. Healthful, vigorous blood is the characteristic of this population, and some writers even go so far as to conjecture that without the constant addition of this renovating stream of life, our people

would soon fall into decay, a premature decline brought on by an excess of prosperity and luxurious habits.

In point of education, this class of laborers must yield to two others, the mechanics and the artistic mechanics; those who are skilled in hand labor without the accessories of art, and those who combine these two branches of skill.

In these two classes we behold the results which centuries of time, the association and affiliation of numerous and heterogeneous races and old traditions, exert on modern civilization. In Europe, we recognize the wonderful development of art and skilled labor brought about by the rivalry of people of diversified thought and physical organization. Among the artisans whose history is old and unwritten, perfection of skill is indebted to that slow and incomprehensible progress which is a law of our intellectual nature, in all departments of human knowledge; a silent, inappreciable growth of the brain.

The greatest skill will always be found where any one pursuit is carried on by an aggregation of labor; in communities where whole families and races have grown up and been trained in a special branch of manufacture. This rule will, we think, apply all over the world. The incentives of rivalry and emulation are one source of this growth in skill, but cerebral development is another and, probably, a more important one.

The greater antiquity of manufactures in Europe has made the aggregation of the manufacturing classes more frequent and prominent there than here, and we have a striking illustration of the success that springs from competition that is bred in large masses of a similarly employed population in the Birmingham, Sheffield and Leeds manufacturers, the Irish and German weavers, the Welsh slaters, all of whom manipulate with surprising adroitness; in all the fine products of France, such as glass, silk and metallic devices and Sevres wares; in the fire-arms of Belgium, the various specialties of German industry, the Bohemian glass workers, the Swiss watch makers, and in the artisans of Italy, whose every town and city has some attractive gew-gaw.

All these productions are the emanations of hand labor, and, as such, they impress their character on all European, as distinguished from American, workmanship. We trace numerous fabrics that have been manufactured in the same district during

successive generations by manual process, and the article thus made has usually advanced in quality, and the people thus employed have continued to grow in dexterity; while skill and celerity of production have always increased with the accession of new pupils to the art in question.

Had the human mind, under the form of inventive mechanical thought and contrivance, shown its creative power at an earlier stage of European progress, the manufacturing system of those older countries would have been led into different channels. Hand labor would have been retarded, and many articles that now owe their perfection and finish to skillful tact, through long education, would be unknown. This argument will receive support by contrasting European industrial genius with that which is purely native American, and on which we shall dilate in a subsequent page.

The most striking aspect, however, which European manufacture assumes in our eyes, is that of artistic hand labor.

In those antiquated lands, art existed in all its variety and graces prior to the production of most manufactured articles of luxury now in vogue. It is born of, and blended with, the European nature, and more decidedly that of the Romanic races and their descendants, and hence becomes incorporated with all the hand produces and contrives for the common purposes of life.

During those long and dimly-seen periods of slow progression that preceded the utilitarian epoch of the eighteenth and nineteenth centuries, nearly all mechanical production partook of this style. All the forms of art creation being of older origin, they were regarded as essential to beautify the dwelling and sacred temple, as well as add attraction, symmetry and charms to all the utensils that ministered to the comforts of man.

The traditional gift of art, both in its pictorial and plastic form, is so widely diffused throughout Europe, that but few manufactures of common utility escape its embellishment. The innate power of giving a visible embodiment to the workings of imagination remains to this day a common inheritance of all the peoples of those southern and middle latitudes; and as they grow up amid the associations thus placed before and around them, they regard all the instruments of utility, the utensils of the house, the weapons of their warfare, their daily attire, their

equipage, and even many articles employed for the meanest purposes, as needing the ornamentation of painting, carving or elaborate design.

In those old countries, the new forces that give such a tremendous impulse to modern mechanical science have not been able to dispel the love and enthusiasm for art. The people of those classic lands live and die in the enjoyment of that mental sustenance which centres in the imagination. The whole civilized world furnishes a market for their productions, and thousands of their experts are yearly seeking our shores to transfer the appreciation for art to this new country.

The existence of this element in Europe from the earliest times, its general diffusion and identification with peculiar races, among whom it seems to be inextinguishable, will readily explain why nearly all useful fabrics have been unable to escape its beautifying influences. The excessive importation of manufactured goods can, in a great measure, be ascribed to the fascination which the artist has bestowed on all the devices of European invention, a fascination that appeals to our common humanity with irresistible effect.

France and her glittering productions have enchained all the civilized society of the earth; and, as far as this kind of seductive influence goes, she will, for a long time to come, hold us in her fetters.

Household appointments, musical instruments, clocks and watches, fine jewelry, weapons, and clothing, and textiles of costly grade, when imported from Europe, are so richly invested with embellishment, that they invade the province of homely utility, and supersede our more durable and unostentatious native productions. As long as these fabrics can be produced abroad in such greater¹ perfection, nothing will hinder the perpetuation of their use among us but some stern necessity, arising from that great moral awakening which opens to our view the dangers of luxurious life.

At the same time let us observe that external and artistic finish has never added any real value to European goods; but, in many instances, it has detracted from their utility, by concealing flimsy work under the garb of a pleasing exterior.

¹Regarding their commercial value.

But what is the actual state of American manufactures at this day? They have had to pass through a long struggle of doubt and uncertainty, great opposition both from abroad and at home, caused by foreign capital, mercantile interests, partisan influence and the cold theories of political economists.

In the present phase of our mechanical industry, the most striking and characteristic fact is, that our youth are generally unwilling to enter as apprentices to hand-labor professions; and instead of serving their four to six years under a master, who, by a slow but salutary discipline, paves the way for future usefulness, skill, and the general decorum and steadfastness of life, they now seek the machine shop, where a similar term of years fits them for all the important purposes of skilled labor, to which the adaptation of machinery and its subordinate forces in nature have become so prominent in the history of our country.

We find that all the machine shops are beset with applicants for instruction and education in this important department of industry. Here the true genius of the American youth displays itself, by indulging its love for geometrical mechanism, straight lines, curves and circles. After the mysteries of the steam engine have been fully fathomed, they have recourse to the lathe, the planer and drill, the familiar instruments of our artisans, and when once fully versed in their applications, they go forth to serve in the greatest army of mechanics the world has ever witnessed.

An apprenticeship to art, or any of its congenial branches of industry, is altogether exceptional, and the young man only becomes an artisan of fancy or pictorial design, when born with the artist nature. His proclivity in this direction is as rare here, as it is universal among the Romanic races of Europe.

In saying this, we do not wish to be understood as assuming that there exists among us a national incapacity for art. On the contrary, were the influences of our political, social, and intellectual atmosphere so changed as to resemble that of Europe, the material now in our possession, imparting from time to time a sporadic growth of imaginative genius, would no doubt bloom and blossom into beautiful forms of life. But for this our national activity is too great; wealth presents too many lures for the talent of the people; and mere adornment, as a branch of labor, is handed

over to foreign artists, of whom the hosts now dwelling among us perform all our requirements.

While studying these facts, however, we cannot but become aware of the important bearing the system of training in machine labor has had on the disclosure of our resources in America. Our youth have not only become machinists through natural and cerebral causes, but the exigencies of the country and the great incentives found in the circumstances of American life, render that profession, above all others, a desirable one.

No proper idea can be formed of the general prevalence of this species of industrial activity among us, and the natural attraction it possesses, except by looking over the statistics of our manufactures, the extent of our railroads, the amount of their rolling stock, our iron works, and the machine shops found in every city and village of the country. A large number of our youth acquire this trade without making any practical application of it in after life. They look upon it as a respectable avocation, and here find an opportunity of indulging their inborn love for geometrical forces and mechanical powers, which in the sequel of their career never fails to aid them in the great race of American antagonism.

To realize the great efficiency of mechanical power, aided by the two motors electricity and steam, we need but study their results in this country during the last thirty-five years. Here we see the vast system of telegraphy, and our whole continent traversed by 70,000 miles of railroads, bringing intermediate wastes of country into sudden cultivation, and rendering them the scene of a new and wide-spread civilization.

Among a certain class of thinkers, the question has been agitated whether most of our manufactures would not be more successfully prosecuted without any nurturing care bestowed upon them. In other words, it is assumed that the government should feel no solicitude about training them into permanent existence; that they should be left to the growing wants of the times and the ingenuity of the brain of native genius.

Fortunately, this extremely liberal doctrine has never been allowed to have the reins, and the products of our toil have not been entirely deprived of a little care and tenderness, although their great success has not been owing to that alone, but rather to the untiring inventive spirit which the wants of our country have

kept alive. Between the hand labor of Europe and the hand labor of America, there has always been a sore struggle, and our people know that that difficulty can only be overcome by consummate ingenuity and profound mechanical thought, evolving from the depths of many a searching mind, curious, intricate and cunning devices—combinations nicely planned—and sending forth by a magical impulse and suddenness of creation, in minutes, what the hand requires hours to perform, and effecting in hours the work of days.

The sewing machine was born of this great necessity of the people, a struggle with the hand labor of Europe. It needed no protection on the part of government to originate the discovery, but its first suggestion came from the need of cheaper labor. The same remark applies to many of our agricultural implements, by the application of which, as in the case of the sewing machine, the aggregate of labor has not been reduced; but, while one has served to minister to new wants of luxury and comfort, the other has given the hand of man a capacity to till the soil and increase the area of cultivation, which he could not have done without the aid of machine labor.

In the application of machinery to the manufacture of clocks and watches, we have another illustration of its perfect conquest over hand labor. Throughout England and France, in the Swiss towns and amid her mountains and valleys, watch-making has been such an old tradition, that the whole world has been supplied from that source with this alluring ornament of the person. The sister art of chasing and engraving has imparted an attraction to this grade of work, and these golden and silver wares continue to be poured in upon us. A superior foreign watch, however, having the united qualities of durability and time-keeping, costs an enhanced price; and it is just at this point that our system of education in industrial thought not only places our nation on a footing of equality with older peoples, but exalts us above them.

It is for this species of industrial culture that we are contending. An equivalent of a foreign watch that costs considerably more, we produce for twenty dollars. Our home market requires an intrinsically good time-piece, divested of all meretricious effects; and in the attempt to supply this want, we have been eminently successful. Considering how much we have already attained in our

very short career of watch-making, we may look forward to a very great reduction in that manufacture, so that the foreign article will soon be enumerated among our gew-gaws.

In the history of our fire-arms we find another remarkable phenomenon. We are now sending arms of the most approved construction to nearly all the states of continental Europe—states that have signalized themselves in this department for more than a century now send us large orders for their implements of war. We owe our success here partly to new discoveries in the fire-arm, and partly to the perfection and durability of our workmanship in all its details. Our most approved models have been thoroughly studied out and tested by experienced military boards of inspection, and we have gained not only a European, but a world-wide reputation, and our weapons of every description are circulating through every part of the habitable world.

We ascribe a large portion of our accumulative wealth to the constant influx of a foreign people. Its material value to the nation has been calculated by a money rate per head; but in the accession of skill and talent, there is a vast gain to our industrial knowledge which rises above a commercial value. The shortest step to the acquisition of manufacturing ability has been taken in the importation of the foreign laborer, from whom we have elicited many of the secrets of old processes, handed down from family to family among the artisans of Europe.

Our rapid progress within the last thirty years in the iron manufacture is attributable, in some degree, to the aid we obtained in this way; and our native workmen, who at first met with much opposition from English skilled hands, liable in their nature to be jealous and clannish, are undergoing an excellent initiation at the hands of their foreign compeers.

The same remark applies to numerous other branches of manufacture, but chiefly such as are identified with hand labor; for in all the products of machine labor the American asks for no instruction or enlightenment from abroad.

In filing, chasing, engraving, gilding and carving, our manufacturers usually give a preference to English, German and Swiss hands; for the operatives of those nations learn such arts by the extremely slow process of an apprenticeship from the earliest years, and the employments referred to are kindred to the arts of

fancy and design ; they are, as already observed, the creation of the art mind, and are appropriated by us to embellish in some measure our more utilitarian style of workmanship.

Encouraged by the course taken by our government to nurture our system of manufactures, all these people remain here, and they, or their descendants, become in due time nationalized. They are inseparable from the particular pursuit which may be their specialty. In this they have been born, reared, and, in most instances, will die. Hence should any of the protected manufactures by which they live be abandoned by the policy of the government, they would dwindle into insignificance or resort to beggary.

For this very contingency, following the expulsion of certain branches of skilled labor from the great stage of American industry, no provision is made by the liberal school. While it presumes that labor is nothing more than an exercise of the physical powers, it overlooks the fact that there has been a long pupilage of habit of body and training of thought in the life of every individual artisan.

To throw aside all this acquirement and enter a rude sphere of uncongenial activity, would prove as impossible as for the physician to resort to law, or the merchant become sea-captain.

At this mature day, when we are preparing for our first centennial commemoration, our nation, in an industrial point of view, has too fully acquired a unity of system and harmony of action, to allow us to think of sacrificing any single one of our manufactures, merely for the sake of indulging in theories of freedom, at the cost of sound government.

Looking at the grand result of the conservative course our government has pursued in relation to the manufacturing interests, we would sum up thus :

It has warmed the nation's impulses into energetic and ceaseless activity in every department of human enterprise, giving employment to skill, and rewarding all its fruits with liberal compensation. The industrial masses are never starved, and the general condition of those who immigrate hither is so ameliorated, that even the mind itself changes under a new sky, and the ocean is rarely re-crossed.

But the most apparent result of the legislative favor shown to

labor and reciprocity of internal trade, is recognized in the great and dazzling premium it holds forth to inventive genius. The love of the American boy for the machine shop, before he has finished his career there, brings about many new suggestions of thought, and provides many incentives to send forth from the recesses of his own brain some novel and intricate combination of mechanical power. The field he has entered upon, as he proceeds from his early novitiate to later stages of apprenticeship, continues to lay open its vast arcana of hitherto undiscovered designs.

Many of our most ingenious inventions started forth from applied thought, while others seem to have proceeded fortuitously from the mind in its fallow condition. Necessity, however, in most cases, is the parent of the great mechanical phenomenon; and no sooner is the want proclaimed than a score of brains are at work to suggest, to improve the suggestion, and then continue to refine the improved suggestion.

And now, wherever this spirit of emulation is fostered by a nation in the way in which we foster it, by sustaining all the diversified interests of mechanism, we would apply the very appropriate term of the promotion of national industrial education.

J. H.

HAWAIIAN RECIPROCITY TREATY.

FOR fifteen years the policy of protection to home industry has been dominant in the United States, checked but once during that period by Senator Sherman's ill-advised ten per cent. of reduction on duties, which has since been repealed. Not the least achievement of the champions of that policy in the period named was the total and ignominious defeat inflicted upon the so called "Reciprocity Treaty" with Canada.

But now a cloud arises, no bigger perhaps than a man's hand, yet capable of spreading and darkening all the sky. A commercial treaty has been negotiated with the little 8 by 10 Kingdom of Hawaii, and despite the precedent of the Canadian treaty, has been ratified by the Senate.

The very unimportance of this treaty probably assured its success; for a good natured body of men will often hesitate to destroy a project apparently insignificant, which a part of their number strenuously urge. Unimportant however this project is not, for if successful it establishes the noxious principle that our commercial policy may be mortgaged for long periods, and every power held by our Government for the maintenance of our national existence may be fettered and nullified, by a temporary majority in the Senate acting in conjunction with the President. Our commercial relations and financial system, instead of being adjusted for the general welfare upon a basis of equality for all, may be tangled, for the gain of a few speculators, into complications that only national bankruptcy or war can terminate.

This surprising piece of fatuity did not originate in the fluctuating House of Representatives, nor was carried in a gust of that fickle impulse supposed to characterize the House, nor now awaits the sober rebuke of a conservative Senate, or the stern veto of a watchful Executive. On the contrary it was first promoted by the Executive: then, after a sensational visit to Washington, by King Kalakaua (whose irreverent nickname of King Calico has a certain grotesque fitness), ratified by the grave and impassive Senate, and now awaits its death blow at the hands of the House. For though at first even the appearance of respecting the constitutional right of the House to originate all measures touching the raising of revenue was disregarded by the Senate, better counsels finally prevailed there, and the treaty is now not to take effect until the necessary legislation shall be enacted by Congress.

Let us hope that this (necessary!) legislation may never be enacted by a House, which by so doing would abdicate the most important of its rights and functions, and would sink into the position of saying "ditto to Mr. Burke," whenever the Senate should choose, under guise of making a commercial treaty with some foreign power, to arrogate to itself the arranging of our national revenues.

Upon the House will devolve, at its next session, the solution of the momentous question whether its own constitutional rights shall be thus abrogated, the national revenues thrown into confusion, and a postern door through our national defences opened

to the enemy, whenever the concurrent, but for this purpose constitutionally subordinate branches of the government so dictate.

We ask the attention of our readers to Hon. Justin S. Morrill's speech in the United States Senate, March 18th, 1875, concerning this Hawaiian treaty, and we urge them to enforce upon their respective representatives in Congress the necessity of resisting the threatened encroachment upon our revenue system and upon our system of government.

Mr. Morrill concludes his speech with these words :

It will be seen that I am opposed to this treaty—

First. Because it seems to me to be in open and plain conflict with the provisions of the Constitution.

Second. Because it would establish a policy and a precedent of discrimination and favoritism in our intercourse with foreign nations—exposing us to the jealousies and ill-will of those less favored—and would be a broad departure from the true American policy of the fathers of the Republic.

Third. Because it offers financially little or no compensation to our Treasury or to our people for an extravagant subsidy, amounting to millions, bestowed upon a small number who own sugar plantations in Hawaii.

Fourth. Because it is now, as it ever has been, a job of a few sugar-planters to enrich themselves at the expense of the United States.

Fifth. Because only on the most diminutive scale can it increase our commerce. The character of their population—small in numbers, destitute of property, little advanced in civilization except in its vices, deplorably feeble in mechanic arts, education, science and trade—forbids all ideas of an extensive or profitable commerce.

Sixth. Because we should not take any incipient steps toward the establishment of colonies which, if established, would be wholly incongruous and incompatible with the fundamental principles of our form of government.

Seventh. Because, if our full title to the islands were to be completed, we should have an elephant on our hands, costing large sums annually, of no practical use to ourselves in time of peace, and inspiring no dread among our foes in time of war.

Eighth. Because there is no general sentiment of the country in its favor, and because there is and ought to be a general sentiment in the House of Representatives against all so-called reciprocity treaties.

THE AMERICAN EVANGELISTS IN ENGLAND.¹

We presume that there are very few of our readers who have not read with some interest, or at least curiosity, the brief despatches in the daily papers, which record for us the extraordinary religious excitement produced by two of our countrymen in the greatest metropolis of the world. Of course the great mass of men have ready-made and unqualified opinions to pronounce upon the whole matter. Some, regarding all religion as a conglomeration of guesses about, and blind aspirations after, the unseen and the unknowable, and classing Christianity as one among the religions, regard such popular interests as one of those forms of moral epidemic, which frequently break out in quarters where better things might be expected, and which show how great the work which is still to be done by science in disinfecting society of the germs of superstition. Others, holding to the historical and corporate church, Roman or Anglican, and looking on all such agencies as unauthorized and uncalled for, are disposed to regard these movements as outbursts of unhallowed fanaticism, although the awakening of similar interest under the preaching of Berthold of Regensburg or a Father Ignatius, a Mgr. Capel or Father Luke Grafton, would receive more lenient judgment. Equally decided, on the other hand, is the approval of the great body of what are called Evangelical Christians, that is, of those Protestant Churches or parts of Churches who shared directly or indirectly in "the great awakening" under Wesley and Whitfield, during last century, and whose theological methods and emphases are decidedly modified by that fact. Being accustomed to such methods and such forms of theological statement as these gentlemen employ, they have no hesitation in treating what is now occurring in London, as "an outpouring of the Spirit" exactly in the line of that which took place in the Church at Jerusalem on the day of Pentecost.

The volume before us, prepared by an eminent Presbyterian divine of New York city, and his relative, a no less eminent Pres-

¹ THE AMERICAN EVANGELISTS, D. L. Moody and Ira B. Sankey, in Great Britain and Ireland. By John Hall, D. D., of New York, and George H. Stuart, of Philadelphia. Pp. 455, 12mo. New York. Dodd & Mead.

byterian layman of this city, is designed for this last class of readers. Its only apologetic purpose is to clear away any misunderstandings which may exist in the minds of those persons who might be expected to unite with them in their cordial and enthusiastic approval of Mr. Moody's labor, but who have been prejudiced by misleading or false reports. These gentlemen have done their work as historians of the revival as well as the materials at their disposal permitted. They have traced the lives of Messrs. Moody and Sankey, before their departure for England, their preaching in northern England, in Scotland, in Ireland, in England again, and last of all in London, using newspaper reports, letters, public testimonies signed by the clergy and ministers of the various cities; and finally they have given a few specimens of Mr. Moody's very characteristic sermons at the close of the volume. The story is told in a straightforward, business-like way, and with a very cordial, not to say thankful exultation in the greatness and the growth of the work. If there is a certain amount of monotony in the story of monster meetings, fervent addresses, outbursts of feeling, that is unavoidable; we do not believe that the story could have been better told, and we are sure that those who desire to get a fair narrative of what these two American laymen have effected, will find no better than this.

Our own view of the matter is not exactly that of any of the classes, which we have specified above, and it is not unlikely to give equal offence to all of them. It is based upon a study of this class of "religious phenomena" begun a good many years ago, and not confined to any one age and branch of the Christian Church. It is not so complete in the sense of covering all the facts, and furnishing a ready made solution of all questions, as some that we have referred to. On the other hand, it is not, whatever it may appear to be, an eclectic essay to fuse hostile theories in one, or pick out of each the bits that please our fancy.

That there is a certain amount of purely spiritual power—a power not of earth but from God—at work in this and in most of such religious "awakenings," we very fully believe. Mr. Moody is a really earnest and sincere man, who having adopted a certain view of Christian truth—a view true enough in all its essential points, we believe, but narrow and imperfect—has by his whole life evinced the depth and the reality of his convictions. He has lived

his apprehension of the Gospel—has turned it into an earnest and single-minded life. His very narrowness has been a source of strength to him, as to most men. The complexity of life and its interests, and their many-sided relation to God's Kingdom, he has no eye for. He has simplified them all down to fit his single formula by the simple process of shutting his eyes to whatever will not so fit. But he has been quite honest in shutting his eyes; his belief in God is not large and broad enough to require him to keep them open. His intellect—itself of about average power—is a steel blade ground down to a single sharp edge, to cut all knots and cleave through all resistances. His spiritual insight is very decidedly a thing of limitations, but within those limits he sees clearly and sharply. He is a man of one idea, and that is the sort of men who rule the world in every department. Those who come to hear him do actually hear real preaching—the message of a man who knows that he *has* a message. And that is no common or everyday thing, even in this age of pulpits and sermons. It is the sort of thing that gathers thousands of educated men to listen to Dr. Hall himself every Sabbath—a comparison of the two men which we would wish to confine to this single point.

What spiritual power belongs to spiritual insight and sincere earnestness, Mr. Moody certainly possesses, and has exercised in this country as well as in England. He has been the cause or else the means of "converting" men, who were living godless, worldly lives, for selfish pleasure or for men's good opinion—for all ends but those that the human conscience regard as worthy of man. He has certainly roused such people to a sense of the reality of the spiritual world, of God its centre, of Christ's authority as "the head of every man." That he has lost or ceased to exercise this power—a power conditioned by his own spiritual qualifications—we do not suppose. That that power is of God, we certainly also believe, holding that all power is so. We would only find fault with such a claim when he who makes it, also makes it mean a denial that other powers are not so, or are less so. Whatever power any man may possess to awaken his fellows to a larger sense of life's responsibilities can be traced to the same divine source; all true education, all just opinion, all genuine enlightenment by the written or spoken word, all rousing others to a deeper and purer sense of the grandeur and value of life's rela

tions, is a power from the moral sun of the universe. All the physical force that exists in this earth, that has turned its dead matter into living organism, that thrills in the nerves, or circulates in the veins, or exerts itself in the muscles of those organisms, from the lowest to the highest, is the effluence of the central sun of our system, science tells us. And to the theist the moral world is not a sunless, centreless world; and from the Centre of this world is the going forth of power to organize men in human relations, to awaken them to even deeper life, and to inspire them with higher and nobler spiritual power. Mr. Moody's claim to be the channel of such power becomes fantastic and repulsive to the thoughtful mind, only when it is sundered from the great whole of which it is a part.

Nor again is his mission as a converting preacher any ground of rejecting his work as unworthy of attention and consideration. While men live and move, and have their being in God—while he is not far from any one of them—it is equally true that great multitudes inside as well as outside the Church, have never attained to any conscious personal communion or fellowship with Him. They are, in the language of the gospel, "As sheep having no shepherd," homeless in the world, without hope and without God as a conscious ground of strength and comfort. If they have any acquaintance with their Maker, it is a sort of nodding acquaintance, expressed in frigid little bits of devotion. Mr. Moody has very high authority for proclaiming to all such that God has been seeking and finding them, breaking down every wall of partition that separates Him from them, and that against the testimony of their own hearts, they may trust the testimony of God's love. And if any are "converted" by that message, they certainly can be nothing but better, happier and more useful for being drawn in out of the outer darkness to the real light and warmth which must be the right state for man. If Mr. Moody or anybody else teaches that that change made God such a father, and not that it simply disclosed Him as being what He always had been, so much the worse for the message. Or if he make the special and temporary crisis of feeling called "conversion," the all in all of his preaching, he is equally out of harmony with the New Testament, and with the Reformers. The prominence of "conversion" in practical theology began with the Order of the Jesuits, and was

borrowed from them by the Pietists and Methodists of last century. Luther and his cotemporaries, and even the Puritans taught very little about it—knew very little of it. The Christianity of that day was more of an objective epic—less of a psychological drama—than that of our Methodistic era. Men's eyes turned more to God, less toward their own "inwards." That an "experience" occurred at any stage of the Christian life, which was over and done once for all, which was never to need repetition—which was not to need ceaseless repetition—was a notion alien to men's ways of thought in that time. It has become one of the very first postulates of "Evangelical" theology. By consequence the line between "believers" and the rest of mankind, has become more and more of an outward and formal line. The Reformers felt that the line which sunders the kingdom of light from that of darkness, ran across their own spirits, that "the old Adam," the true "Anti-Christ," was in their own hearts. Every condemnation of the Bible spoke to that evil nature, and every rebuke and censure found its object there. That which made the worst man evil, they found in themselves, an enemy to be fought and overcome. To them, as to Mr. Wendell Phillips, Christianity was "a conflict, not a dream." They had not the comfort that our modern "Evangelical" Christians seem to find in drawing a hard and fast line between "believers" as the especial favorites of heaven, and the rest of mankind. They could not sort out the Bible into two bundles of texts—one for themselves, one for the world. Their faith was broader, more manly, more human than that of the generations who have followed John Wesley.

There was another hard and fast line which they do not draw, a line which Martin Luther and all the best and greatest minds of his age abhorred and protested against, the line between the religious or spiritual and the secular. The Reformation was, on one side of it, an attempt to get rid of that line; to modern Protestantism of the "Evangelical" type, it is both dear and essential. The conception of a faith as broad as life, a faith embracing and consecrating all life to God, has been displaced by a religious faith, a faith to "save souls," but not to transform life and society. And so to Mr. Moody and all his zealous co-workers, this is the great end of their preaching; and "conversion," the

one means to that end. And just here, as we said, lies much of the man's force, in the narrowing down all life to a single issue, in the bringing all its complexity into the uniformity of a single problem, in the concentration of his force in a single direction. Mr. Moody has not a doubt or a question in his own mind as to the equal authority of each and every part of his teaching. The doctrinal truths drawn from the Bible, and the methods and notions which characterize the present type of our Christianity, and which have been the growth of the last three centuries, are all equally divine to him. The downrightness of this belief would be something wonderful, did we not see the same thing continually reproduced in shapes that are grotesque and fantastic, in the hooks and eyes of the Dunkards, in the long beards of the Rascolinks, in the stiff collars of some of the Friends, and in a host of consecrated oddities and whims of the various sects.

Nor does this exhaust the merely earthly elements which are commingled with the real power "from above" in this particular case. Those vast and densely crowded meetings and the tense though subdued excitement which pervades them, and which are continually spoken of as evidences of a special divine influence at work in society, are nearly always the occasion of large displays of those really natural but unusual forces, which men take for divine because they *are* unusual. The dynamics of large assemblies are as little understood as the acoustics of large audience rooms seem to be. The transmission of undulations of nervous impulse through a mass of men so collected, and the outbreak of certain nervous epidemics when the tension is prolonged, are matter of record in all ages. When this nervous excitement gains such a height that the muscles are also affected—people speak of these as "physical" manifestations. But the excitement of the nervous system is a thing as purely physical, a thing as utterly unspiritual as the convulsions of the muscles can be. The line between the physical and the spiritual is not one that can be drawn by the eye; the former simulates the latter in a thousand ways—as for instance in the influence of stimulants upon the feelings and the thoughts.

Nearly all our superstitions rest upon the popular ignorance of the exact limit or boundary line between the spiritual and the physical world. Spiritualism would lose what hold it has upon

the popular mind if it were generally understood that both intellect and will are capable of *actio in distans*, of direct action without the use of ordinary means. Spiritualism exists because people assume the truth of a hard and fast line which does not exist, and something of the same sort is the superstition which assumes that the infectious nervous excitement of great assemblages is a spiritual phenomenon. Religious people have acted in all faith upon that assumption in all ages. The vast pilgrimages of the East, the parents of the great pestilences, seem to have been designed to stimulate faith by such earthly means. The Neoplatonists of Alexandria, who tried to form a new anti-Christian religion out of the remnants of old Paganism and the Platonic philosophy, fell into somewhat similar methods of attaining religious ecstasy through theurgic arts. And in our own times the ordinary revivals of the Protestant churches, as well as the retreats and missions of the Society of Jesus, from which they are copied, are essentially theurgic in their methods, *i. e.* they use natural agents to reach spiritual results.

That Christianity has nothing to do with such methods need hardly be said. Its first and last word on the whole subject is—"That which is born of the flesh is flesh, and that which is born of the Spirit is spirit." It recognizes no upward "transmutation of forces" from natural to spiritual. It accepts no such helps and props for faith. It recognizes no source of religious ecstasy but one—the Spirit of God—and in setting forth Him as the true source it repudiates all natural sources. Greek Paganism sought in alcohol the source of religious exaltation, and consecrated this natural agent to the service of the gods; but Paul says: "Be not drunk with wine wherein is excess, but be ye filled with the Spirit." Now, we have no hesitation in pronouncing the "animal magnetism," which thrills large assemblies, to be in itself no better than a refined sort of alcohol. We say so after having ourselves experienced it, and after being deluded into the belief that there was something supernatural in it. How far Mr. Moody's results have been the effects of it, how far he consciously or unconsciously relies upon it, we cannot pronounce; but the record of his labors given us in the book before us suggests its presence at every point. First, there is the aroused and excited expectation of Mr. Moody's coming; then houses crowded to overflowing—pro-

tracted services, morning, noon and night—dense audiences, fervent prayers and appeals to the hopes and fears of the assembled multitudes. Much of this is well and right, but the circumstances, the methods, the surroundings, are all favorable to purely natural excitement.

We are not left to conjecture in this regard ; we have on record the story of previous revivals, and the vast reaction to deadness and torpidity which followed them and which stamped them as in the main purely natural excitements. For if these movements were the effect of a new influx of divine power into the midst of men, they could not but record themselves in results as lasting as time itself ; or rather, just in so far as they have been so, they have left such results, while just in so far as they have been natural excitements, they have, by the force of natural law, been followed by an equal reaction in an opposite direction. Now the record shows such a preponderance of the latter result as to cause us to regard these excitements are anything but desirable. Jonathan Edwards was more than the Moody of New England, in the days when the Methodist spirit first took hold of the descendants of the Puritans. The pen that wrote the treatise *On the Will* has recorded for us also the story of that great awakening, which was also the immediate forerunner of the Unitarian movement. Jonathan Edwards' own converts expelled him from his own pulpit in Northampton, and put on record a vote of the church that he should never be allowed to occupy it again ; and the greatest of American theologians lived to put on record *his* disappointment and chagrin at the results of that revival, and to repudiate the theory of conscious adult conversions as the means of the Church's growth. Nearly fifty years ago Prof. Finney, of Oberlin, was the Moody of central New York, sweeping through counties and neighborhoods with a power apparently never surpassed in the history of revivalism. Two years ago we visited a part of that region and were told that there was not a living and active "Evangelical" church in that or the three adjacent counties, and that the name it bears in ecclesiastical circles is "the burnt-out district." And so it will be forever ; actions and reactions must forever balance each other by the law of compensation, which governs the *natural* life of man as it governs every other department of nature ; while the spiritual life of man, when brought into liberty by the

Spirit of God, is subject to no such limitations. There the law of compensation has no validity.

The personality of Mr. Moody, considered on what we may call its magnetic side, is part of the explanation of the movement. He has, as all Revivalists have had, a large share of the magnetic force, the power to excite it in others. When he is at rest, no person could well seem more uninteresting or vacant. His face is neither pleasant nor attractive, his eye dead and heavy, his figure short and thick-set, his bodily presence weak and his speech contemptible. But the presence of a multitude has the power to transfigure the man, and he becomes for a time another person. The action and reaction of speaker and audience are something remarkable. He reminds one of the Scotchman's boast that Chalmers could move an audience to tears by the way he said *Mesopotamia*. His nervous force once roused to action becomes the leaven of the whole lump. His influence appears to extend beyond the reach of his voice, for many of his friendliest London critics say that it does not fill the vast space of Agricultural Hall, and yet dense audiences are kept waiting on his preaching in every remotest corner of it.

That he is capable of doing good, and has done it, we have already stated as our conviction. That the good he does is at all proportional to the excitement and stir he produces, we cannot for an instant believe. "The kingdom of heaven cometh not with observation."

JOHN DYER.

ISMALIA.¹

AFRICA has ever been more inaccessible to explorers than any other land. Although Egypt is one of the first countries which we discern in the dawn of history, and, with the whole northern coast, has been well known from that time to the present,

¹A narrative of the Expedition to Central Africa for the suppression of the Slave Trade, organized by Ismail, Khedive of Egypt. By Sir Samuel Baker, Pasha, M. A., F. R. S., F. R. G. S., Major General of the Ottoman Empire, etc., author of "The Albert N'yanza Great Basin of the Nile," "The Nile Tributaries of Abyssinia," etc., etc. With Maps, Portraits, etc. New York: Harper & Brothers.

the interior of the continent has remained unvisited. Even the maps of Africa in use when the generation just grown up went to school, had in the middle a large blank yellow space, lettered "Unexplored," on the borders of which the Mountains of the Moon seemed to wander in an uncertain sort of way, and the exact location of Timbuctoo was not beyond a doubt.

The last few decades have changed all this; even the sources of the Nile are no longer a source of speculation; soon explorers will sigh in vain for new worlds to conquer, and there will not remain a spot where the imagination can take refuge and laugh to scorn the geographer. Where now, we would ask, will the pigmies dwell, the men "whose heads do grow beneath their shoulders," and all the other marvels of that once mysterious land, in which for ages human credulity has delighted?

Sir Samuel Baker has written three books about Africa, all interesting, the last especially so. The first, "The Nile Tributaries of Abyssinia, and the Sword Hunters of the Hamram Arabs," relates his explorations in a region which has since been brought into notice by the English Abyssinian war; the second, "The Albert N'yanza," gives the history of his discovery, closely following Speke and Grant's, of the Victoria N'yanza, of the second and larger of the vast equatorial reservoirs, whence, 2,700 feet above the sea, the Nile draws the never-failing supply which enables it to pursue its way for over 3,000 miles to the sea; the present volume is an account of the expedition sent under command of the author to suppress the slave trade of the White Nile. The White Nile, it should be mentioned, is *the* Nile, the Blue Nile being only an affluent.

To the lovers of hunting adventures the first of these three books will be especially attractive. The exploits of Nimrod himself would pale before those of the Hamram Arabs, who, mounted on their swift horses, attack and slay, with the sword alone, the largest and most savage beasts, even the elephant and rhinoceros. In their praise our author grows enthusiastic, a thing rather rare with him, and declares that he felt a longing to emulate them, which, for the sake of his readers, it is, perhaps, as well that he did not.

Baker is a many-sided man, well-fitted to be an explorer and much beside. For such estimate as can be formed of a man from

his own recital of his actions and sentiments, there is ample material in the volumes mentioned; for though the writer is not at all egotistical, nor even intimate with his readers, and speaks of himself, though necessarily constantly, yet as it were impersonally, as the chief actor in the story he is telling, it is evident that he was the soul, and no insignificant part of the body also, of each and all his parties and expeditions. This reticence about himself, apart from his position, leaves his physical characteristics less clearly defined than his mental ones; but aided by the portraits of him in his books, and a few casual remarks, we can gather that he is a man of powerful frame and vigorous constitution, proof against labor, hardship, and the tropical climate, patient of hunger, thirst and fatigue, a thorough sportsman, a crack shot, a bold rider, all of which capabilities stood him in good stead and were, indeed, indispensable. Nor is the inner man unworthy of the outer. Courage, and what does not always go with it, fortitude, patience, inflexible determination, and withal coolness and foresight, all are there. Honorable, humane, and just, a terror to the wrong-doer and the oppressor, he must have been a perfect revelation to the wretched Africans, whose only notions of a superior race were derived from their intercourse with the slave-traders. Horace described him in that noble ode: "*Justum et tenacem propositi virum.*"

Sometimes, indeed, he finds himself constrained to make use of what, to put it mildly, we might term humbug; as when, in his Albert N'yanza expedition, he drives off a party of slave hunters from the territory of a negro potentate, well disposed to him, by hoisting the English flag and proclaiming the country under its protection, to which it had about as much right as Chinese Tartary.

In our satisfaction at the beneficial results of this device we may forbear to carp at it. Some scientific acquirements, considerable practical knowledge of medicine and surgery, a fertility of resource which never deserts him in any emergency, from a broken gunstock to a sunken vessel, a store of varied knowledge which enables him to be equally at home on land or water—the union of these qualities of mind and body constitutes Sir Samuel Baker a remarkable man. An Englishman of Englishmen, he gives little vent to the softer emotions; constantly mentioning his heroic wife (the epithet is ours, not his), he seldom reaches a higher strain of

eulogium than a commendation of the courage and presence of mind of "my good little officer." We can understand that he would simply say in the Albert N'yanza, that for some hours she lay, as he thought, dead: no expression of feelings could heighten the force of such a statement. But though we are somewhat disposed to quarrel with him on this score, she is not harmed by this seeming coldness; her deeds speak for themselves, and from the commander of the expedition she merits the formal, but earnest praise, which, more than all others, she receives at the close of his book. Once only does the strong, deep love, which such a man could not have but felt for such a wife, break forth. On their homeward way after the discovery of the Albert N'yanza, they reached Suez and took the railroad for Alexandria. "The past appeared like a dream; the rushing sound of the train renewed ideas of civilization. Had I really come from the Nile sources? It was no dream. A witness sat before me, a face still young, but bronzed like an Arab by years of exposure to a burning sun, haggard and worn with toil and sickness, and shaded with cares happily now past, the devoted companion of my pilgrimage, to whom I owed success and life—my wife."

Even when he gives vent to indignation and disgust there is no violence, no fury. The discontent of the officers and soldiers with the expedition, increased by a scarcity of food, rose to the point of formal demand that it should be abandoned. "Disgusted in every bone," the commander deigned no reply, but ordered out a foraging party, and records in his journal, "By God, not a man of them shall go back except by my orders." An ample supply of corn brought in by the foraging party quieted the dissatisfaction.

In 1868 the Prince of Wales visited Egypt. Sir Samuel Baker was in his suite, and a formal proposition was then made to him to take command of an expedition, designed to put a stop to the slave trade, by annexing to the dominions of the Khedive a large region of country to the South of the Egyptian boundary, on the upper waters of the Nile. He was invested with "the most supreme and absolute power, even that of death," during his four years term of service. A number of Englishmen joined his party in various capacities, who were of the greatest use, though to several the climate proved fatal.

Procuring in England a large quantity of supplies of all sorts,

from cotton goods to steel steamboats, he shipped them in the summer and autumn of 1869, in three divisions, up the Nile, and then set out on Dec. 5th, 1869, by way of the Red Sea to Souakim, thence across to the Nile, and by the river to Khartoum, the rendezvous and true point of departure of the expedition. Hither the troops which were to constitute the force had been previously sent. They consisted of some 1,600 infantry and artillery, and some 250 "very irregular cavalry," which last the lack of transportation enabled the commander, much to his satisfaction, to leave behind. Months before orders had been given to prepare a fleet, but nothing of the sort had been done. Nobody ever does do anything at the proper time in Egypt. Instead of a fleet, the Governor coolly informed the "Christian pasha" that he had procured him a house, as he would be compelled to wait till next year, the season at which alone the White Nile can be ascended being nearly past. This inactivity was due in a great measure to the secret but powerful opposition of the slave traders, and their allies, the government officials. Knowing that "no weapon is so fatal as delay in the hands of the Egyptian officials," Baker was determined not to be thus hindered; he contrived to infuse into the authorities some of his own energy. In an incredibly short space of time a fleet was prepared, and on Feb. 8, 1870, the larger portion of the force, with its commander, left Khartoum for Gondokoro, the base of operations. Human opposition had been overcome, and they had now to encounter the forces of nature. Down the current of the White Nile are swept masses of floating vegetation of the rapid growth peculiar to tropical regions. So enormous are they that at times they completely fill the space from bank to bank, and form an obstruction, under which the current runs rapidly, and through which a canal must be cut to allow the passage of vessels. Sometimes they break loose, and the pent-up flood bears them on with immense force. Vessels have been overwhelmed by them and carried down into the river depths. The wonders of the Nile are not yet exhausted. For several years past these floating dams had been suffered to remain; the strong current had swept other masses beneath them, so that the whole river bed had been filled up; the river for a long distance had *actually disappeared*; not even its course could be traced, and the dammed-up water had converted the whole region into a

vast marsh. It was now late in the season, the water was falling, and after a vain effort to find a passage through the "sudd," as this singular obstacle is called, Baker was compelled to establish a camp on the river, and await the next season. A whole year was thus lost. Eight months passed very pleasantly, and a new departure was made December 11th, 1870. Up the Bahr Giraf, a branch of the main stream, cutting canals with swords and bill-hooks from one lake to another, through mud and matted grass, only able to guess at their course, the fleet struggled onward through the vast swamp, beset by malarious fever, swarms of insects and other like miseries, and at last, after building a dam to get over shallows, they found themselves, March 19, 1871, in clear water, and April 15 reached Gondokoro, in latitude $4^{\circ} 54' N.$, 1860 miles due south of Alexandria.

Here, on our author's former visit in 1864, there had been an Austrian mission. All those who had dwelt there had died or gone away. The savages among whom these good men had labored, had forgotten even their names, one only excepted; they had powdered up the bricks of the mission house to make red paint for their bodies, and as a result of so much toil and self-devotion, there remained only a grove of lemon trees, which the missionaries had planted.

African missions, our author thinks utterly useless. He has no liking for the negro, whom he pronounces "vicious, treacherous by nature in the extreme, insensible to kindness, and controlled only by force or fear"—notwithstanding which estimate he evidently takes pleasure in relating various instances of gratitude, honesty and other good qualities. Once, having set free a number of women and children, captured by the slave hunters, the enthusiastic females rushed at him in a body, embraced, kissed, and licked him in the exuberance of their gratitude. As they were dressed in the costume of our first parents, and differed in their notions of cleanliness from those of civilized beings, the object of their demonstrations did not receive them in the spirit in which they were offered.

Taking the facts as our author found them, we cannot pronounce his judgment of the negro character a harsh one. He tells us much of interest respecting the various negro tribes of Central Africa. Evidences were constantly met with of the horrible bar-

barism which other accounts ascribe to the negro in his native state.

In the Albert N'yanza it is related on the authority of one of Baker's men, an eye-witness of the fact, that a slave girl who attempted to escape from a party of traders was brought down wounded by a shot. Some of the traders' native allies seized her, tore the flesh from the living body and devoured it. On the death of a King of Unyoro, his sons fight for the throne. When the question is decided, the victor thrusts his spear into the ground at the right hand of the late king's body, which has till this time been lying in state, awaiting the formal obsequies which are the first duty of his successor. They are thus performed: a huge pit is dug, at the bottom of which several of the dead monarch's wives sit, holding his corpse on their laps. To the mouth of the pit are brought a large number of the subjects of the king, who have been seized as they came out of their houses in the morning, their legs and arms are broken, they are thrown in, the earth is shoveled in and stamped down by a yelling crowd, to the accompaniment of drums, horns, etc., until the pit is filled. Proof is given that this custom existed in Central Africa as long ago as 1346.

The papers have recently announced that Baker's successor, appointed by the Egyptian government, sent an envoy, Col. Long, an American, to the friendly sovereign of Uganda, King Mtése. The envoy was received with great cordiality, but his gratification was somewhat marred by the nature of the honors paid him whenever he visited the king; they consisted in decapitating before him a number of the king's subjects. The king said that it grieved his heart to kill them, but—*noblesse oblige*. From the depths of such degraded humanity it would seem that no unaided ascent is possible. Nor are these savages without many of the arts. They make bark cloth, cultivate the ground, build houses, live in communities under an organization so complete and strict as to excite Baker's admiration. Some tribes work iron with no small degree of skill, and none seem to lack courage, if we can judge by the manner in which they faced the weapons of Europeans. Strange to say, the people most distinguished for their good qualities, the Shooli tribe, have no *religious belief, or even sentiment*. The Shooli are great hunters, and their territory is

parceled among the several communities and individuals of each community; each man has the right, a right most strictly respected, to kill game on his own tract. With this example before him, Baker scouts the idea that man in a savage state could ever have possessed property in common with his fellows.

At Gondokoro, or Ismailia, as it was renamed in honor of the Khedive's son, the formal ceremony of annexation was gone through with, and a fortified camp was established. Annexation chanced at a favorable time. Intestine wars among the Bari tribe had left desolate the region on the east bank of the Nile at Ismailia. But the Bari in the vicinity, friends and allies of the slave traders, were hostile and insolent, and needed a severe chastisement to reduce them to good behavior, which they got. There now appeared on the scene the arch enemy of the expedition and its chief, a prominent slave trader, named Abou Saood. He came with vessels from Khartoum, and instantly set to work to excite discontent among the officers and soldiers, with such success that they broke out into what would have been a mutiny, but for the courage and address of the commander. He seems to have well understood the different sorts of people with whom he had to deal, and how best to influence them. Nor did he lack devoted followers; more than one loss is recorded of those faithful unto death, in words of affectionate sorrow. In one instance he carves on the stock of the rifle of a brave soldier who had perished, his name, as a memorial, before he gives the weapon to him who is most worthy to bear it.

Very early in the campaign he had formed a body-guard of 40 men, selected chiefly from the Soudani or black (not negro) regiment. The Soudanis Baker much preferred to the Egyptians. This little corps he himself drilled in rifle practice and cared for when sick. They became strongly attached to him and never failed him in the hour of need. Their commander, Lt. Col. Abdel Kader, seems to have divided with Lt. Baker the regard of their chief. When this corps was first formed the Englishmen gave it, for sufficient cause, the name of the "Forty Thieves." Under the influence of Baker, thieving soon came to be looked on as a disgrace, and "the forty" were the crack corps of the whole force.

Meantime preparations were made for a move southward. In disobedience of Baker's positive orders, the colonel com-

manding at Ismailia, during his temporary absence, had sent off to Khartoum, with a number of sick men, women and children, a large number of able-bodied men. The total number fit for active service was thus reduced to 552. It had been designed that a number of camels should have been with the force to transport a steamer in sections and the heavy baggage for 70 miles, past the last cataracts, to where the river was again navigable. The steamer would then have commanded the river clear up to the outlet of the Albert N'yanza. Official inertness had caused the camels to be left behind; the carriers promised by the negro chief of the Bari ruling over that section were not forthcoming, with the usual negro bad faith, and Baker was compelled at last to set out with only 100 men, leaving behind him at Fatiko a garrison of another 100 to watch the slave trader Abou Saood's station, and secure communications. On March 18, 1872, Baker, with his little command, set out for Masindi, 160 miles distant, in $1^{\circ} 45'$ n. lat., 20 miles west of the Albert N'yanza, and the capital of Unyoro, the country ruled over by Kabba Réga, which they reached April 25th. With the father of this king, Baker had been on good terms on his former visit in 1864, and he hoped to establish similar relations with his son; but the young negro was the embodiment of everything vile and treacherous, and when he had gotten everything from Baker that he could in the way of gifts, he tried to poison the party, and failing in this, attacked them suddenly with overwhelming numbers. The result was the repulse, with great slaughter, of the savages, and the burning of Masindi; four of Baker's men were killed, including one of his best officers, for whom he entertained a sincere affection.

The problem now, was to get out of the reach of this amiable potentate. Secure in their fort, they could not move a step away from it except in force, nor could they obtain any provisions; to remain was impossible. Burning up everything they could not carry, the retreat began; they were soon forced to abandon their herd of cattle. Heavily laden, for they had few carriers, they struggled on through a series of ambuscades, fighting every step of the way, and at last reached the Nile, after a march of 80 miles in 10 days, having lost out of 104 fighting men, 10 killed and 11 wounded. An alliance was now made with Rionga, a rebel chief,

with whom Baker went through the ceremony of drinking blood from one another's arm to cement the league.

The most alarming news now came from Fatiko. Abou Saood had instigated Kabba Réga's treachery, and a plot was also on foot to attack the troops at Fatiko, where it was believed that Baker's whole detachment had been destroyed. Leaving behind Abdel Kader, with a portion of the force, Baker set out with his "40" for Fatiko. As he neared it the natives came in large numbers to complain of the outrages of the slave traders. They reached Fatiko, to the astonishment of all, friends or enemies; but hardly had they interchanged greetings with their comrades of the garrison, than a treacherous onset was made on them by the slave traders.

Though relying on their superior numbers they were, after a sharp fight, cut to pieces and dispersed by the government forces. Meantime Baker's term of service was drawing to a close. He had accomplished all he had undertaken: a large extent of country had been brought under the sway of the Khedive, and was held by garrisons of his troops; communication with the upper Nile had been reopened; friendly relations had been established with some negro tribes, and others who were hostile had been chastised; the slave trade had been stopped, and peace and security reigned where the inroads of the slave hunters had carried fire, slaughter, and desolation. For two years and a half no mail from Europe had reached the English party; they now received one which contained, with other matter, 700 copies of the *Times*; it did not, however, bring any despatches from the government at Cairo; the silence was ominous. Leaving his "little Paradise at Fatiko," Baker went to Gondokoro, and after two months occupied in preparation, the entire English party turned their faces homeward May 25, 1873. With genuine feeling Baker parted from his brave "40," many of whom shared his emotion as he walked for the last time down the line, drawn up on parade.

On August the 24th they reached Cairo. The Khedive received Baker very graciously, bestowed on him the Order of the Osmanie, 2d class, and promoted and rewarded various of the officers and soldiers. Abou Saood had hastened to reach Cairo before Baker, in order to make complaint against him; but his attempts thus far had miscarried, and he was in prison. The

formal proofs of his misdeeds were now laid before the authorities. Desirous to appear against him, Baker was nevertheless dissuaded by the officials from awaiting the trial, and the narrative closes with his departure for England. In shape of a postscript appear these words, "After my departure Abou Saood was released, and appointed assistant to my successor." The explanation of this startling fact requires an appendix, in which, "more in sorrow than in anger," the high-souled Englishman sets forth the utter subversion of the original purpose of the expedition, and the probability that the results won by so much toil and bloodshed would be worse than fruitless, and that the conquests of the Egyptian arms under his guidance, instead of extirpating the slave trade, would extend and foster it. Not questioning the sincerity of the Khedive, he believes that this despotic ruler, to use our political vernacular, "could not stand the pressure" exerted by the numerous and powerful class interested in the maintenance of the slave trade.

After the triumphant recital of the closing chapter, this is a sad sequel, and the author's feelings are fully shared by his readers. Whether his forebodings have proved correct we have as yet no means of judging. So interesting is the matter of the book that we think little of the manner, nor is there much scope for fine writing. The style is clear, simple, and forcible; if unadorned, unblemished. There are many spirited descriptions, and there is a life and energy in the telling of the story that brings reader and author into full sympathy. In the midst of graver matters the chronicler does stop rather often to record a "pretty shot," but one can indulge him when it is remembered that "there is nothing so delightful as a little sport, particularly when you are in low spirits," and also that often the dinner of a good many hungry people depended on the success of that shot. But the interest of the story never flags. From the beginning to the end we follow, with undiminished zest, the fortunes of the adventurous Englishman and his party. In truth we do not like to part from those with whom we have so long and so pleasantly journeyed, and to the Arab blessing "may they live a thousand years and their shadow never grow less," we would add, may Sir Samuel Baker, and his noble wife, travel again through savage lands, and may he write for us the record thereof.

The publishers, Harper Brothers, have compressed the two volumes of the English edition into a single one in no respect inferior, that we can discover, the only observable change being in the size of the print, which is smaller. The numerous illustrations are good, there is an index, and that important accompaniment to every book of travel, complete and well executed maps, has not been omitted. In all particulars the book is worthy even of this well-known house.

NEW BOOKS.

KATERFELTO: A story of Exmoor. By G. J. Whyte-Melville. The International Series. 12mo. Pp. 313. Price \$1.25. Philadelphia: Porter & Coates.

This is a story of the times of the early sovereigns of the Hanoverian line in Great Britain, before the plotting for the restoration of the Stuarts had ceased; and if the book is put forth for the delight and edification of boyish readers we can speak very highly of it; though we are inclined to think Mr. Whyte-Melville would feel himself insulted if somebody should insert after the sub-title, "A book for boys." The characters are a quack doctor, *alias* a magician, money-lender, political spy and plotter; a young cavalier of the Stuart party, who kills a man in a midnight brawl and has to flee from London in consequence, and who is the hero of the book; the heroine, a west-country damsel; a gypsy-girl; both of these being in love with the hero; a wretched specimen of an English country parson, brother of the man who was murdered by the hero, for which deed the parson vows against the latter eternal vengeance, which is quickened when he finds the object of his hatred to be his rival for the love of the heroine; finally, the *sine qua non* of this author's books, a horse which he describes as the most beautiful, the fleetest, and altogether the best horse in the kingdom; very much in the tone in which we may any day hear young ladies talk of each new spring bonnet that meets their eyes.

There are two noteworthy scenes in the book, one the description of a stag-hunt, the other the account of the escape of the hero from the final pursuit of the parson, who is assisted by the sheriff of the county and a band of gypsies,—as the author slyly confesses, rather an odd combination. We have never had the good luck, or the bad, whichever the reader considers it, to be

one of a hunting-party, and are consequently unable to say how accurately this one is described, but both these scenes, together with one we had omitted to mention—the robbery of a noble lord, traveling with government despatches, by our hero, aided by the same band of gypsies, some of whom afterwards join in the pursuit of him, possess a good deal of interest, if not genuine excitement.

The book, as we have already suggested, lacks that charm, which, as in Sir Walter Scott's novels for instance, will make it of interest to adult readers, or will place it, like that author's books, which it somewhat resembles, among the English classics; but it is an admirable book for young people, being, so far as we can see by a hasty perusal, healthy in tone, and free from vulgar coarseness or false sentimentality.

SPAIN AND THE SPANIARDS, by N. L. Thiébelin. Boston: Lee & Shepard, 1875. Pp. 404.

This is a very clever and interesting volume, on a subject which is of perennial interest. From the day of Ford's Hand-book, none of all the scores of volumes that have been written to satisfy the curiosity of those who know Spain only from without, has so well done its duty as this little book. The author is the Azamat Batuk, who amused and instructed so many readers of the Pall Mall Budget and Gazette, and did so much to give that journal its character for quiet wit and pleasant humor, in such contrast to the ferocity of the Saturday Review. From the Pall Mall the author rose to the dignity of war correspondent of the great dailies in London, and then to the still higher empyrean of the special of the New York Herald in Spain. His letters made his two short volumes which were issued in London a year ago, and now they are recast into this single volume, which we are glad to see and say bears the copyright of the author himself; so that in appearing for the first time as an American author, he does so on some show of right. His journey to Spain took him, in March, 1873, to the Carlist camp, and there he made acquaintance with all the leaders, from Carlos himself to the oldest of his not very enthusiastic allies—the Curé of Santa Cruz, for instance, being under sentence of death for disobedience of orders. Indeed, the chronic state of revolution in Spain is in no way better instanced than in the apparent readiness of the Carlist forces to fall to pieces from a total want of harmony between its leaders, and that in the midst of failure and in the time of hardest trial. What it would be in case of success may be well guessed by seeing how each party that created a revolution in Spain has been destroyed by internal dissensions, and most frequently brought to its short shrift by assassination or exile of those who did most to secure even their short tenure of

power. The characteristics of Spanish warfare, political and military, are well given in the description of the country as M. Thiébelin found it, with the Republic in possession and carrying on a sluggish campaign with the Carlists. The main features are hardly likely to be changed by the restoration of the Bourbons to the throne in the person of King Alfonso, so long as his cousin, Don Carlos, maintains his right to be the only legitimate head of their dynasty and of the kingdom. The description of the sturdy independence of the people of the northern provinces, and of their absolute indifference to anything like national feeling, is well balanced by the account of the perfectly passive state of the inhabitants of Madrid, with their wonderful manifestation of a mixture of impulsiveness and self-command; of verbal violence and moderate action; of apparent bloodthirstiness and actual aversion for bloodshed; of intense party hatred and almost unlimited respect for their individual opponents. As against the ordinary traveler and the usual book of travels, this little volume is of the very highest order of merit. True, it describes men and events which have now passed away; but in doing so, it gives such a sketch of the motives that inspired the former and of the national traits that characterize the latter, as serves to leave a clear, strong and distinct impression of the Spain of to-day. Besides, trained in a good school of newspaper work, M. Thiébelin knows very well how to distinguish between the mere casual circumstances of a traveler's experiences and those that really bear on the matter in hand; he nowhere overloads his book with the incidents of his own varied life in camp, in court and in the cities; but every fact recited, every story told, is made to serve his purpose of giving a picture of Spain, not only as he saw it, but as it exists in these modern times—with so much of good and evil inherited from its ancient history, and still influencing its daily life and customs, even in this day of its hard struggles.

THE MILLS OF THE GODS: A novel. By Mrs. J. H. Twells.
Philadelphia: J. B. Lippincott & Co. 1875.

No doubt the apologue proper in this book—and the title warns us of a moral—may be found in so much of the history of one man as involves the happiness, and therefore the fate of two women, whose fortunes are closely allied to his, and possibly of a third, a Lady Florence Ellesmere, who may be mentioned very briefly, in view of the clever intimation which is given us of a lack of sensibility, justifying the doubt whether any external terrestrial influence whatever could long affect her being, one way or another. The mills of the gods, precisely speaking, are only exhibited as at work upon Dyke Faucett, and him they grind to dissolution through the final, and lubricating, agency of the

soft waves of the Mediterranean. Dyke Faucett was the one child of Constance Dyke, adopted by Sir Philip Standley because of his dead mother, whose memory the baronet worshiped as the consequence of an unrequited passion which he bore for her, and notwithstanding the perhaps questionable, but certainly natural conduct of the lady, in encouraging, years back, his attentions, whilst herself bound to a young officer toiling for his laurels and an income in India. The mother was of that character—of barely enough principle not to be unprincipled, affectionately, because full-bloodedly, sympathetic, and so far regardful of the happiness of others as to be glad to find it assured, as next in importance to her own—which, coupled with bravery and refinement, may very well be represented in its transmission to a son, as a wicked mixture of audacity and intolerant selfishness. Taking into consideration the sphere in which he moved, the young man is admirably, because consistently drawn. That sphere was as glorious as any which could have been depicted by Mr. Phœbus, comprising the best society in England and on the continent, which Faucett enjoyed by the aid of fabulous wealth—an agency of the fullest efficacy in his case, because supplemented by the witchery of his marvelous beauty, preserved from muscular derangement by his maddening indifference to the wiles of most eligible women. We do not wish to suggest an adverse criticism in thus indicating the cast of a homily which is preached alike without ostentation and without weakness, and effectively emphasized by the introduction of simple scenes under less glaring lights. Faucett, after a career of easy, but momentous, social victories, has reached the conclusion, as he comes upon the stage, that life would be bearable but for its pleasures; and hails with relief the entirely novel victim whom he finds in Dora Fairfax. This object of pursuit stirs in him all those emotions which might be called good if we could safely thus distinguish certain agreeable perturbations of soul from the accustomed and monotonous excitements of gay living. Doubtless, could he have appreciated the standard of honorable men, and conceived a desire to attain to it, Dora would have incited him to a change of life; but, even to himself, there was very little attempt at concealment of his selfish motive in winning the girl. In the first chapter we find him gaining her consent to a marriage of which his guardian was *not* to be informed, and flying from the innocent caress in which she conveyed it in a frenzy of emotion, that, however painful to see in its delineation, must be accepted as the necessary close of the scene. It was a venture to betray thus the man's character at his first presentation, and the risk was well taken, in that the picture is filled out with strokes that, to the last, are of undiminished vigor.

The strength of the subsequent sketches of the career of these two

lies in the just conception which the authoress has manifested of the force and direction of the man's passions, and of the indestructibility of the principle of the girl. First a devoted husband, then fearlessly indifferent, and finally an unhesitating deserter, Faucett never made a mistake in the pursuit of what to him was as necessary to his happiness, as was to Dora the purity of her soul. Dora's life was narrowed. Faucett's remained as free as it was before he encountered her; and the ills that befell him in this apparent liberty, which was really only subject to the check of a possible, but not probable, disclosure of what he gracefully considered a whimsical and scarce inconvenient alliance, grew from sources quite below the plane of the abandoned wife. He moulded and marred her maturity. She did not in the least affect his later existence. When he had cast her off she was wholly gone. This is certainly an effective feature of the novel; sufficient for, alike the one problem of the volume, and the application of the moral of its title. Happily, there is no attempt made to solve the problem, which could scarcely be discussed without elevating its subject into an undue importance, and perhaps endangering the popularity of the creed which Faucett illustrates but to confirm as long as, independently of nice analysis, he is assumed to be a brute.

Beside these two prominent characters, there is Pauline de-Courboisie, of the nationality and the temperament of Julie Caumartin, and almost as devoted. Knowing nothing of Dora, this lady found her only legitimate rival in Lady Florence Ellesmere, to whom Faucett engaged himself in obedience to the command of Sir Philip, as an ostensible concession to the humor of an old man, still strong enough to suggest the unanswerable argument of a disinheritance in return for rebellion; but, independently of his property, no nearer the heart of his beneficiary than any other person who blindly loved him. Lady Florence and the princely gift of Sir Philip were of the lightest possible weight as soon as the Marquise could, in the early weeks of her widowhood, assure Faucett of her acquisition of an enormous fortune in the loss of her husband;—one million of francs per annum being a heavier income than even Sir Philip's boundless generosity could bestow; and, after the deliberate commission of what Faucett would have conjectured was bigamy but for his vivid, although listless recollection of the palpable frailty of Dora when he deserted her, and his carelessly gleaned information of her experience later, in Paris during the war, the French woman and her mate went to sea in a yacht, and were lost.

That, after this, Dora should acquire a fortune, a position, an unexceptionable husband, was inevitable, as likewise the product of the mills. The other characters in the book are sketched in, to furnish divertisement at need, and always to constitute the

proper stage supernumeraries when the principals cannot be left alone. This business, if we may so speak, is well done; for the side pictures and the side play make up, with the main action, a harmonious whole. Independently of a little slowness at the outset, the book is properly toned and proportioned; and it is, by a very long measure, superior to most on the list which the reader of its class finds at his disposal.

AN ANALYSIS OF THE LIFE FORM IN ART. By Harrison Allen, M. D., Professor of Comparative Anatomy in the University of Pennsylvania, member of the Philosophical Society, etc. Philadelphia: McCalla & Snavely. 1875. 4to., pp. 71.

This paper we take to be a reprint of an article published in the transactions of the Philosophical Society, or of some other scientific body, although that does not appear, nor is there any statement made as to the origin or purpose of this elaborate study. Dr. Allen has given a very thorough and exhaustive examination of his subject, and he has added very much to the value of the text by a full series of illustrations, executed by Wenderoth & Co., by the photo-electrotype process, from drawings by Mr. Hermann Faber. The memoir discusses in successive sections the Imitative, the Inventive, the Ethnic Value of Design, the Realistic, the Conventional, with references especially to the Fantastic, the Grotesque, the Symbol, the Zoo-Myth, the Dragon, and the origin of all these, the leaders in the menagerie of art. In the second part there are special discussions of the various emblems used in art—the Lion Head, the Palm Tree, the Serpent, Man in various shapes and forms—and of the difficulties met with in analyzing the life form, and of the study of inscriptions and pictographs. The whole subject belongs to the last development of Ethnology, of Art as bearing upon the history of civilization, and it is pursued with a wealth of references and an apparatus of citations and illustrations that cannot but be of use to students of comparative history, to those who find in the records of pre-historic periods the means of tracing back our modern culture to its very earliest origin. Dr. Allen in this way connects the very latest productions of modern art with the very earliest evidences of an effort to reproduce natural objects for art use.

The general deduction to be made from these minute researches, is that picture-painting leads to alphabet-making, and the tribe early evincing a tendency to copy accurately from nature possesses a higher capacity for development than another in which such tendency is imperfectly manifested. The reproductions of the flora and fauna of a country are fair examples of the greater or lesser enlightenment of its inhabitants. Primitive people are realistic in their tendencies; early art being the purest,

so far as faithfulness to the model is concerned. Then come the figures distorted by conventionalities or encumbered with the attributes of an obscure symbolism. The customs of workmen are stronger than any legal restrictions, but both influences have been at work in producing the conventional and fantastic designs which are characteristic of various countries. The origin of not a few mythical designs—the Griffin, the Centaur, the Sphinx—is traced home to the partial knowledge of the early artists, who sought to reproduce and perpetuate their imperfect knowledge of existing but unfamiliar objects. Liebnitz himself, one of the most marvelous intellects of our race, in his *Natural History*, published in 1778, was so far led astray as to describe the bones of a rhinoceros as those of a unicorn, and to attempt to restore them in normal position. Starting with the general belief that the unicorn was an existing animal, it was easy to make the needless deductions from the skeleton before him. The Dragon is probably based upon the lizard type, such as Durer in his realistic forms interpreted it; but both in the hands of artists of our own civilization, and in that of Chinese and Japanese workmen, it became merely a symbol of oppression and cruelty.

The comparison between archæology and zöology is of itself a historical study, which has been pursued from Chaldea to Western Europe—from Bunsen, in Egypt, to Brasseur de Bourbourg, among the Aztec. In the Dresden codex, there is contained within a sheet of manuscript, in the ornamentation of a batch of earthen pots of the same baking, a full series of designs, showing the range and extent of their use. In other cases, notably in Aztec designs, a series may extend through the entire art range of its history; and in this instance, so vast is the labyrinth of shifting form, so slight the thread of consistency, so cumbersome, whimsical and tasteless is much of its ornament, that it is often impossible to identify the objects. The study of the lion heads of Asia, Egypt and Europe, shows a curious connection in the archæology of the three civilizations, and a great departure from the national model. The section devoted to the various art modes of expressing the notions, real and conventional, inventive and imitative, of man, especially the facial expression, may well be contrasted with Mr. Darwin's recent volume, and with Mr. Ruskin's clever but dogmatic and contradictory essay in his *Aratra Pentelici*. The contrast between the head of Apollo Belvidere and that of a modern Englishman, given in Mr. Ruskin's study of heads, mainly from medals, might with advantage be added to the interesting series supplied by Dr. Allen's researches. The elaborate discussion of the rock inscriptions and pictographs with which this paper closes, may well be used to assist travelers in learning where to look for evidences of primitive art and how to identify them. As a thorough and exhaustive

study of a subject which is now just beginning to attract attention, Dr. Allen's paper is of especial value. In a recent ethnological manual of inquiry, issued by the British Association for the Advancement of Science, prepared by the Anthropological Society of London, and intended for the use of travelers, who are requested to return the results of their investigations in the shape of answers to these queries, there have been a great many subjects mooted, which could, perhaps, be better answered by a diligent student of Dr. Allen's paper and of the original works so largely studied and so exhaustively cited by him, than by a mere guessing among the doubtful readings of natural objects and the traces of art work on them. In Dr. Allen's essay we are forcibly reminded of the benefit indirectly received by the present fashion of bric-à-brac collections. Even the taste for china does good in its way, for it sets people at work in some mild sort of research; and the knowledge of "marks," with the needful search for information as to potters and pottery, is a revelation to those who hitherto knew nothing of the world of art, outside of the conventional picture or the recognized engraving or other reproduction. There seems to be a sort of mild retribution in the fact that the large proportion of collectors belongs to the gentler sex; for Dr. Allen bids us not to forget that to the females of many tribes has the work been allotted of ornamenting the pottery and other articles, while the recording of exploits has been reserved to the males. However, there can be no doubt that the collector's passion is of a far higher and better kind than it ever was in earlier times; for it is connected with archæological researches, it bears upon the development of civilization, it has to do with the real history of culture, and it furnishes an incitement to study, which fortunately finds abundant occupation in the last productions of our own literature and that of other countries. No one can fail to be the better for the study of Dr. Allen's paper, not only for the information which it supplies, but because it shows that there are fresh lines of investigation open to all who have a real zeal for knowledge.

VOLUME I. OF THE PUBLICATIONS OF THE UNITED STATES PATENT ASSOCIATION. A defense of the United States Patent System, by J. S. Perry, Albany: Our Country's Debt to Patents, by H. Howson, Philadelphia. Boston: James R. Osgood & Co. 1875. Pp. III.

This pretty little square 12mo., bound in white muslin, stamped with fanciful designs and an unintelligible monogram, is a very clever bait with which to catch whales or lesser fry. Under the pretense of being a branch of a Congress of Inventors, who met at the Vienna Exhibition to secure uniform laws as to patents,

the patent agents of this country met in Washington and organized an association to protect the rights of inventors! Their first step is to issue an address in the shape of a speech in Congress by their president, the Hon. J. S. Perry, made in answer to the several schemes for amending the Patent Laws, broached in 1873-4; and as Mr. Perry is one of the most silent members of the House, his speech is filled with figures that no man could have read or spoken in his place. In short, it is a clever manifesto prepared to his 'prentice hand, to show that in each of the great patent-right inventions in use, the profit is much less than is usually supposed, and less than that on which manufacturers count for articles not patented at all. Mr. Perry marches bravely through his sea of figures, but comes to no result, other than that our existing system only needs a little more protection for the patent agent to be perfect. What their protection now amounts to is ingeniously suggested in a statement at page 46, that the cost of obtaining the twelve thousand patents issued during 1874, may be safely estimated at four and a half millions of dollars, of which one million two hundred thousand dollars is given to twelve thousand patent and attorneys' fees at \$100 each—an item which of itself speaks well for this branch of their business, as it is of course much less lucrative than the contests waged over patents, in which vast sums of money are expended on patent lawyers. Mr. Howson indulges less in figures of fact than of fancy, and he draws an eloquent description of the blessings that have accrued to this country by reason, not of its inventors and their inventions, but of the Patent Laws and the skill with which they are administered. No one is likely to forget or to be allowed to fail in his gratitude and respect for the great industries which owe their existence to inventors, and their rewards have not often been a bit more than a due public acknowledgment of their services readily grants. There is, however, a strong and a growing feeling that many patents are in no wise the reward of actual inventors, but rather the ingenious devices worked up by skillful agents and lawyers, to keep the public out of certain lines of industry, and to secure an actual monopoly to a few manufacturers. The courts are rarely composed of experts, and an opinion once given in favor of a patent is almost invariably maintained, although public opinion and the disinterested judgment of those who are competent to decide, may freely and clearly speak out against such a result. A great corporation with a great capital can establish its right to a patent, and then wage war on poor little dealers, who never perhaps knew of the invention, or found it recorded long after their daily use of the very process claimed by patent, and who wake up only to be enjoined and imprisoned and fined out of existence altogether, unless they can buy their peace. This it is that weighs against the real usefulness of our Patent Laws—that there is little or no con-

fidence in the judgment of the Patent Office or in that of the courts; and while real inventions are entitled to all the protection they can get, and rarely get enough, sham inventions are disguised by ingenious patent agents, passed by incompetent Patent Office examiners, supported by unskilled courts, and then enforced with all the might and majesty of the law. It is this system which needs advocacy, and to it the patent agents give it in their first volumes. We have no doubt that it will be followed by many more, for they are a skillful, specious, successful body of men, who mean now to combine to resist changes in the Patent Laws, and to take Congress as they have taken the courts and the Patent Office, under their special care; so that no matter what becomes of the public and the inventor, patents shall be within their exclusive custody and keeping.

SECRETS OF THE SANCTUM: An Inside View of an Editor's Life.

By A. F. Hill, Author of "Our Boys," "The White Rocks," "John Smith's Funny Adventures on a Crutch," etc., etc., etc. Pp. 312. Philadelphia: Claxton, Remsen & Haffelfinger. 1875.

Any one who is curious to know how a newspaper is gotten up—to see a live editor hard at work with pen, paste-pot, and scissors, to take a peep into the composing and the editorial room of a large daily paper like the New York *Tribune*, to learn something of the mysteries of "interviewing," reporting, and book-noticing—will find all this and much beside graphically described in the pages of this volume. Mr. Hill has written a very readable book, having presented in a small space and with considerable tact a great variety of information which will be novel and interesting to most of his readers among the *profane*, and which he has enlivened and illustrated by many passages of his own experience as a newspaper man. A portion of his book is, however, addressed to the followers of his own craft, in the way of criticism upon some of the repulsive features of American journalism; and we heartily wish him success in his effort to awaken his erring brethren to a realizing sense of their short-comings. In particular we commend his chapter on "Slang" to the thoughtful perusal of the average reporter and writer of "locals" and "city items." Faults of style, and even an occasional grammatical solecism, may find some excuse in the haste with which most newspaper writing is done; but such expressions as "went for" (for assaulted), "boozy" (for intoxicated), "lip" (for offensive language), are black spots on the pages of a newspaper—and they are to be found not alone in New York journals—which cannot be wiped off. "Everything can be said against the use of slang," says Mr. Hill, "and nothing in favor of it. It takes the place of real wit and humor, and seems to threaten to drive them off the field. Legitimate fun is discouraged

when we arrive at a point where only a few coarse slang words will create a horse-laugh, and where refined and courteous humor is not even understood."

I. ACCIDENTS, EMERGENCIES AND POISONS. II. Plain Directions for the Care of the Sick, and Recipes for Sick People.

That a man is either a physician or a fool at forty is an observation so true that it has received the universal sanction of civilized mankind. Among the untutored, the medicine man, being divinely gifted, and therefore a privileged character, is allowed to combine pharmacy and folly. But in enlightened lands, where doctors are made by special training and not by divine right, it is different. At forty we must decide between the cap and bells and the gold-headed cane and snuff-box.

Candor compels the admission that, even where university walls arise, an over-keen glance once in a while catches glimpses of the motley under the sable both before and after forty. Such instances are, however, rare. For the majority of men the rule holds good. A choice must be made. Either the experience and observation of more than half a life-time make their possessor an amateur doctor, or else folly claims him for her own.

A most praiseworthy desire on the part of the author of these two little pamphlets to swell the ranks of his medical brotherhood in the community, has impelled him to his task, and if those who, having eyes, see not, and having ears, hear not, could be induced to read small books that are wholesome, but not very clever, or listen to advice that is sound, but not always welcome, he would have an abundant reward. We fear, however, that the volumes, though gratuitously distributed from the Howard Hospital, whence they emanate, and from several railroad and insurance offices in connection with the present far-reaching system of advertising, will fall short of doing the good they ought.

The suggestion upon the covers, to "keep this where you can readily find it," indicates an intention that they shall be regarded as books of reference—but if the commonest applications of common sense fail in cases of drowning men or blazing children, it is scarcely to be hoped that there will remain presence of mind to hunt up these books to find out what to do. Under the head of "Burns and Scalds" we learn—a lesson never to be forgotten—that "*the first thing is to put the fire out.*"

A preface informs us that free use has been made of Florence Nightingale's "Notes on Nursing;" but those familiar with the writings of that remarkable woman will miss her fullness of knowledge of the subject, her keen insight into its details, her clear, terse style. We recall another book, "Health, Five Lay Sermons for Working People," by Dr. John Brown, of Edinburgh, that the

author would have done well to have followed in method, for it, too, appeared in the form of a little pamphlet, yet it made its way into homes of all conditions, wherever English is read, and did vast good. Quite recently Fothergill's "Maintenance of Health," likewise by a physician, has attracted considerable attention, and deservedly. Carefully written, accurate books on this, and kindred subjects, are always welcome; and medicine has no nobler work than in showing men and women how to keep well. But the mere "Family Doctor Book" is an abomination, and the greatest danger in writing on medical matters for the people is the danger of drifting in that direction in matter or in style.

The story of the sower and the seed has these many centuries given comfort and courage to the noble-hearted, who work for their fellow-men, to make them holier and wiser; to the preacher, when the ears of his hearers were dull; to the teacher, when the faces of his pupils were blank; to the physician, when his warnings were scorned and his counsels forgotten—let us hope that these anonymous lessons may somewhere fall upon good ground and bring forth fruit in diminished suffering and averted death.

THE NORTH AMERICAN REVIEW. Nos. 246 and 247. January and April, 1875. Boston: James R. Osgood & Co. Philadelphia: W. B. Zieber. Terms \$6 a year.

This chief of the American Quarterlies holds its place of honor at the head of the American periodicals with as much honor as ever. However one may dissent from the course of its policy on single points, it is impossible to deny its great merits and the great services it has rendered to American literature and to political and economical science.

The most notable article in the two numbers before us is that by James Russell Lowell, on Spenser, in the second of the two. Professor Lowell is not only by all odds the greatest of American poets and the first of American humorists; he competes with Mr. Whipple for the place of the first of American critics; and a new essay from his pen is an event in the literary history of the year. He began his career as a prose critic in the *Phenix*, a short-lived magazine, in which he and a few other young authors heralded the new age of our literature. He pursued it in his now equally forgotten *Conversations on the English Poets*; and his later volumes of collected essays are among the most charming and instructive in the language. Though tempted to compare his later with his earlier judgment on Spenser, we forbear to say more of the present article than that it justifies the literary silence which preceded its publication.

Of the other papers in these numbers we are especially interested in that of Charles Francis Adams, on the Granger movement, that of Charles Loring Brace, on Pauperism, and that of Francis A. Walker, on the Wage Fund Theory. The first is an excellent statement of the farmers' grievances against the railroads, and only fails to deserve attention when its author comes to the theoretical conclusion and gives us a diatribe against the Tariff. Even the *Nation* has done better in going over the same ground, and points out that the western farmer is really oppressed by his position in a district in which there is not even an approximation to that equilibrium of the industries, in whose absence farming can never be profitable. That that equilibrium would be promoted by destroying a large proportion of what non-agricultural industries the country already possesses, few will believe.

Mr. Brace's discussion of Pauperism is interesting as the work of a man who has practically faced the problem presented by the existence of the savage's poverty and misery within the sphere of civilized life. He gives many facts and practical suggestions derived from his own experience, but the theoretical part of his essay is altogether drawn from other authors, and those none of the best. He misses entirely the true explanation of Professor Fawcett's ridiculous blunder as to pauperism in Philadelphia, and gives one of his own which is entirely untrue as a matter of fact.

Gen. Walker goes into the history of the Wage Fund theory, and shows that Prof. Cairnes's revamping of that fantastic bit of economic speculation has no economic value. He proposes that it be quietly and decently buried.

A LETTER TO HIS GRACE THE DUKE OF NORFOLK, on occasion of Mr. Gladstone's recent "Expostulation." By John Henry Newman. New York: Catholic Publishing Company.

THE VATICAN DECREES AND THEIR BEARINGS ON CIVIL ALLEGIANCE. By Henry Edward, Archbishop of Westminster. Same publishers.

THE TRUE AND FALSE INFALLIBILITY OF THE POPE. A controversial Reply to Dr. Schulte. By Dr. John Fessler, Bishop, etc. Same publishers.

A REPLY TO THE RIGHT HON. W. E. GLADSTONE'S POLITICAL EXPOSTULATION. By the Right Rev. Monsignor Capel, D. D. New York: D. Appleton & Co.

The stir created by Mr. Gladstone's expostulation with English Catholics as to the political bearing of the decrees which pronounced the Pope infallible, is dying out like other "nine days' wonders," but the controversial literature to which it gave rise has—some of it—a permanent value, and is worthy of study apart from the immediate occasion of its origin. As we said was pro-

bable at the beginning of the discussion, Mr. Gladstone has been proved in the wrong as to most of the direct points that he raised, and the only course left for him is to plead that the prestige imparted to the Papal See by the dogma of the Vatican Council is not likely to be confined to Papal decisions contemplated in the definition. His charge that Catholic Emancipation was secured by pledges on this very head, given by Irish and English Catholics, has been finally exploded by a very able and learned correspondent of the *Spectator*, who shows that the Catholic subjects of George III. and George IV. never gave any such pledges, and that the only statement to which they ever committed themselves was that the Infallibility of the Pope was not *de fide*, which it was not till the Council proclaimed and defined it. Equally thorough has been the refutation of his argument that the new dogma gives the Pope power to dictate the politics and political principles of loyal Catholics. That Popes have made such claims is admitted on all hands; that they were acting in exercise of their pontifical authority as the universal and infallible episcopate, is denied by the greatest Catholic theologians, and the denial, as we shall see, has the sanction of Pius IX. himself.

Dr. Newman's pamphlet is one of the most happily conceived of controversial publications. It is like a steel hand encased in a velvet glove, so admirably does it exemplify the old maxim *suaviter in modo, fortiter in re*. There are few finer illustrations of the best English temper of mind, its abhorrence of abstractions, its fine tact, its firm grasp of the concrete and the tangible, with yet the idealization, or rather the divination, that rises above and beyond the bare facts to the truths they embody. Nothing, indeed, can be more English than the whole cast of Dr. Newman's intellect, and we can very well imagine the impatience with which ardent theorists of his own side must have read many passages in his letter, especially those in which he pleads for the "minimizing" demands upon the weak faith of less fervent Catholics.

His ecclesiastical superior, Cardinal Manning, is a man of much thinner and less genial intellect. His never was an English mind, either before or since he exchanged his Anglican Archidiaconate for a place in the Roman Catholic Church. His Anglican sermons, and his *Unity of the Church*, exhibit to us just the same type of mind as his latest essays and deliverances—a certain feminine delicacy of mind, which is not, as in Newman, balanced by an equally robust manliness,—a wire-drawn logic, a lack of broad sympathies and intellectual generousities. His great talents have grown riper, but they will never expand into genius; his mind is a well-stored workshop, whose every possibility can be gauged and measured, while Newman's is the artist's studio, with inexhaustible capacity for surprises and unexpected excellences. His thesis

is, the Vatican Council has made no change whatever in the position of true Catholics. The Pope was infallible before and he is so yet. With all the power and vigor of statement and argument that his pamphlet displays, it shows no capacity to enter into the popular feeling which Mr. Gladstone's ill-judged manifesto really represents, and to allay the alarm by its reassuring statements. Wire-drawn, logical, technical—not convincing.

We should judge that Mgr. Capel is, if not a greater theologian, at any rate a cleverer controversialist than either of his compeers. He is a born Catholic, still a young man, but already high in place and a candidate for still greater distinction. His devotion to the poor of the most wretched districts of London, and his great popularity as a preacher with West End audiences, are equally marked. His pamphlet is meant chiefly for Catholic readers, and is written from the standpoint of one who is actively engaged in the practical work of the Church. Its very opening is a fine specimen of literary fence; and the points he takes against Mr. Gladstone are put with great clearness. As to the relation of the Pope to the civil government, he holds with Archbishop Kenrick, the one great theologian whom the American Catholic Church has given to the world. The Archbishop's treatise on the *Papal Supremacy* gave offense to some zealots by its cautious statements on this very topic when it first appeared, and Mr. Brownson had the audacity to say, in his *Review*, that its author had said less than the whole truth in order to avoid offending Protestant prejudices. But times are changed, and the Brownsons and Wards are more moderate in statement since Mr. Gladstone propounded his questions.

The last pamphlet is, in many respects, the most important of all that have appeared on the Catholic side, for it has the sanction of the present Pope, and it discusses with most thoroughness all the points in debate. Bishop Fessler was also Secretary to the Vatican Council. His pamphlet is a reply to one by Dr. Schulte, of Prague, in which all the offensive acts and utterances of previous Popes, especially those that bore on the civil power, were presented in detail, with the syllabus at the close of the list. Bishop Fessler faces one and all of these,—says, virtually, that these Popes uttered or acted on their own private opinions, and no Catholic is bound one whit by any of them. *Ex cathedra* decisions on points of faith and morals alone bind, and such decisions are very rare. What is necessary to constitute a decision such, is not finally agreed on by the *schola theologorum*, but enough points are established by general consent to rule out the utterances pleaded by Dr. Schulte. Even the *Syllabus Errorum* is not admitted by Bishop Fessler as possessing such authority, though on this point he is not very clear. No one who wishes to be thoroughly *au fait* with the subject can afford to ignore Bishop Fessler's pamphlet, to which Newman and Capel both appeal.

BOOKS RECEIVED.

The Chemistry of Light and Photography. By Dr. Hermann Vogel. With one hundred illustrations. International Scientific Series XIV. New York: D. Appleton & Co.

Fungi: Their nature and uses. By M. C. Cooke, M. A., LL. D. Edited by Rev. M. J. Berkeley, M. A., F. L. S. International Scientific Series XV. New York: D. Appleton & Co. 1875.

Astronomy. By J. Norman Lockyer, F. R. S., with illustrations. Science Primer VII. New York: D. Appleton & Co.

Spain and the Spaniards. By N. L. Thieblin. 16mo., pp. 404. Price \$1.75. Boston: Lee & Shepard. 1875.

Macready's Reminiscences, and Selections from his Diaries and Letters. Edited by Sir Frederick Pollock, Bart, one of his executors. Crown oct., pp. 750. Price \$1.50. Macmillan & Co. New York: 1875.

Publications of the United States Patent Association. Vol. I. A defense of the United States Patent System. By John S. Perry, Albany. Our Country's Debt to Patents. By H. Howson, Philadelphia. James R. Osgood & Co. Boston: 1875.

Social Science and National Economy. By Robert Ellis Thompson, M. A., Professor of Social Science in the University of Pennsylvania. 12mo., pp. 415. Price \$1.50. Porter & Coates. Philadelphia.

The American Evangelists. D. L. Moody and Ira B. Sankey, in Great Britain and Ireland. By John Hall, D. D., of New York, and George H. Stuart, of Philadelphia. Pp. 455, 12mo. Messrs. Dodd & Mead. New York.

Sixth Annual Report of the State Board of Health of Massachusetts. January, 1875. Boston: Wright & Potter, State Printers.

Warrington's Manual. A Manual for the information of officers and members of legislatures, conventions, societies, corporations, orders, etc., in the practical governing and membership of all such bodies, according to the parliamentary laws of the United States. By William S. Robinson, "Warrington," Clerk of the House of Representatives of Massachusetts from 1862 to 1873. Boston: Lee & Shepard.

Brief Biographies, Vol. I. English Statesmen. Prepared by Thomas Wentworth Higginson. Pp. 363. Price \$1.50. G. P. Putnam's Sons. New York.

Sexes Through Nature. By Antionette Brown Blackwell. 12mo., pp. 240. Price \$1.25. New York: G. P. Putnam's Sons. 1875.

How to Make a Living. Suggestions upon the art of making, saving, and using money. By George Carey Eggleston. Putnam's Handy Book Series. 12mo., pp. 127. Price 75 cents. G. P. Putnam's Sons. New York. 1875.

Plain Directions for the Care of the Sick: and Recipes for Sick People. Also, Accidents, Emergencies, and Poisons. Distributed through the Howard Hospital and Infirmary for Incurables. 1518 & 1520 Lombard street, Philadelphia.

Sex in Industry: A Plea for the Working Girl. By Azel Ames, Jr., M. D. 16mo., cloth, pp. 158. Price \$1.25. Boston: James R. Osgood & Co. 1875.

Problems of Life and Mind. By George Henry Lewis. First Series. The Foundations of a Creed. Vol. II., crown oct., pp. 487. Price \$3.00. James R. Osgood & Co. Boston: 1875.

THE
PENN MONTHLY.

JULY, 1875.

THE MONTH.

The stir in European politics caused by the war rumors of last month gave an opportunity to England which she wisely and well made use of. The isolation which she has enjoyed—if that be the right word to use—for a number of years from Continental politics, had certainly given rise to a wide-spread opinion that her influence had ceased and that she was no longer to be considered a force in the political affairs of Europe. The recent occasion was happily seized by Lord Derby and without a particle of risk, for the peacemaker is twice blessed who prevents a threatened fight where the combatants are both unwilling, and in this last case all Europe was anxious to avoid the trials and consequences of war. In fact the war rumors were rumors in the strongest sense, and war was at no time imminent. But by taking advantage of the opportunity which offered itself for a moment to step in and, with a large wave of the hand, to act the peacemaker, Lord Derby has received the thanks of all men and won for England what she prizes highly and has long yearned to possess, the reputation of great political influence and the fame of a mediator. To have done this at all was to have done well: to have done it at the present time, after these years, during which the politicians of the Continent have seemed to act without reference to English wishes or English prejudice, is to have accomplished something great; and the statesman who has

done so much without risking a life or expending a shilling, has earned the undying gratitude of people no less famous for wise economy than for exalted patriotism.

By way of making a row (in which he is always so happy), Lord Russell chose the moment of Lord Derby's triumph to do what in another person might seem strange and, in a man less venerable, ridiculous. He demanded that the correspondence which had passed between Her Majesty's and the other Governments should be given to the public, accompanying the demand with some rather querulous criticisms of the course of his successor. To this Lord Derby well replied that to give to Parliament all the correspondence would be to break faith (for many of the letters were confidential) with other governments, and destroy their present confidence in English diplomatic discretion; while to publish mutilated copies might convey unjust and incorrect impressions of the truth. He, therefore, declined and came out of the position with the remark that a policy of non-interference by England in Continental affairs did not mean indifference to, or isolation from them—a sentiment in which the House and the country joined. The result of the "incident," as the French would call it, is to strengthen the government of Mr. Disraeli abroad as well as at home.

THERE is a question whether the Government has acted throughout with wisdom in its management of the case against Guikwar of Baroda. The mixed commission has not worked well, and the fact that the natives in it decided one way and the foreigners the other may be expected to have, with the commoner classes in India, much the same effect as the failure by a divided jury, half white and half black, in Louisiana, to convict a white man of an outrage on a negro, would have with the conservative white leaguers of New Orleans. The deposition of the Guikwar seems to have been justified on the ground of incompetency, mismanagement and what is known in the West as "natural cussedness;" and now that he is fallen, there are few so poor as to do him reverence. The Prince of Wales' journey into India will undoubtedly do good and awaken a feeling of loyalty which, though dormant, is now strong enough in Indian breasts. Time has cured the remembrance of much oppression and many injuries: the sufferings of the fathers may be visited upon

the children, but they do not always color the prejudices and govern the feelings of the third and fourth generation.

THE Government which Alfonso or Alfonso's care-takers are establishing for him is reactionary to a degree. Among its latest performances has been the handing over of the universities and the public instruction to the priesthood. The most distinguished professors of the University have been arrested and in some instances banished from the country; for declining to subordinate their teachings to ecclesiastical rule and theological dogma—and at the last information the triumph of the clergy was complete. How much of this kind of thing Spain can bear no one can tell. Her sufferings under a so-called Republic were so great that she is too much exhausted to resist the bigoted tyranny of this unfortunate boy; and it may be that after centuries of such acts, the Spanish mind will take them very calmly for a long time to come. But the outlook for free speech, free thought and free political action, is just about as bad now in Spain as it has ever been.

REFORM is now the order of the day, and the ring-smasher the hero of the hour. Whether stimulated by the example of Gov. Tilden, or, as is to be hoped, by his own sense of duty, Secretary Bristow has been waging against the whisky rings a most effective warfare. Of all the "rings"—for that seems to have gone into the language as the most fit term of description for such combinations—which have developed themselves of late years, the whisky ring is in some respects the most powerful. Its members may be numbered by the thousand, its wealth by the million, and so skillful has been its management that no department of the government has been free from its influence, no place in which its hand has not been felt, and no secret remained inviolable to its eyes. Successful contest with such an organization required secrecy, despatch, courage and determination; for the only blow which could hope to be effective was that which was unexpected, and with such a monster one blow could not be sufficient. The odds are undoubtedly against the ring now that exposure has come in a time when reform is becoming a popular cry, and the people beginning to be aroused. It would be by no means a strange, and in many things a satisfactory result, if as a consequence of the events of the

last six months. Americans next year might have to choose between a man like Bristow on the one hand, or Tilden on the other. On either horn of such a dilemma most patriotic men might be willing to hang, so far at least as the character of candidates is concerned.

THE gentle savage has lately proved himself rather a stubborn fellow. Not all the President's arguments, accompanied though they were with the assurance that he (the President) knew much better what was good for the Indian than the Indian did himself—not all the ingenuity and address of the Honorable the Secretary of the Interior, supported by the personal presence and dignity of Indian Commissioner Smith—availed to turn Red Cloud and his companions from their determination not to sell the Black Hills country for five and twenty thousand dollars. They had come to talk freely with the Great Father, they said, and would confess to him frankly that they preferred their own country, which was guaranteed to them by treaty, to the attractions of life in the Indian territory; and did not propose to be the laughing stock of their people by making any such bargains as their good friends the Secretary and the Commissioner proposed. Those philanthropic statesmen were pressing and persuasive: all the inducements which great experience had shown to be effective—all the charms which pale-face invention could devise to soothe the savage breast and tempt the untutored mind of the poor Indian—were used in vain: the red man remained resolute and went home uncheated and unbought. The Black Hills country is no doubt quite worth \$25,000, even if the precious metals are not to be found there in such abundance as some think must be the case; and without the gentle influences of such a paternal government as ours has always been toward the Indian, they must sooner or later be overrun by white adventure. The Sioux, however, are a warlike people and still quite numerous, and a war with them would cost many times the sum of which that figure is the interest. It is undoubtedly the part of wisdom to obtain the land by honorable treaty and the payment of a fair price, whenever it shall seem to us necessary to buy and to the Indians to sell. Meantime we can wait awhile, even at the risk of disappointing the many restless individuals whose souls are yearning for adventure and golden nuggets, or of blocking for a year

or two, in that part of Continent, the wheels of the Juggernaut car of "Manifest Destiny."

IT is rather a curious commentary on the President's letter to General Harry White, that that which has been chiefly asked and debated since its publication is whether or not it answered the question to settle which it was ostensibly written. It is always difficult, of course, to satisfy many minds on a point like that of the Third Term—when they who have an interest in remaining dissatisfied and unconvinced are more apt to be "of the same opinion still" than even those who are "convinced against their will." The innumerable company to whom the Third Term question was a god-send—the despairing and exhausted editor, searching for subjects and sensations—the Democratic politician, to whom it was the fulcrum on which he hoped by a judicious use of the lever to hoist himself into office, heavy as he is—the doubtful, the suspicious, the uncertain: all these of course it was difficult to satisfy. But it does seem as if the President might have written a letter which would have distinctly answered the universal question, and settled it definitely and forever. It has been held by some that the letter to White does that, but the general feeling among earnest men is, however, not one of unmixed satisfaction. The PENN MONTHLY has never been among those journals which have believed that Gen. Grant was scheming to make himself a perpetual dictator. It has never held that he was arranging his plans with exquisite political skill and foresight to secure his reelection for a third term. Its measure of him and its view of the Third Term question has been substantially this: That General Grant would be influenced by any motive of extreme delicacy in accepting the Presidency again, or by any "sentimental" reverence for the example of the Fathers, it would be quite unjust to him to believe. Nothing that he has ever done or said has authorized such an opinion of that side of his character. But on the other hand he has never shown the political capacity and adroitness which must be taken for granted in the case of a man who could deliberately make all the moves in the three or four years' game which it was necessary to play, with one selfish end in view, and yet keep that fairly concealed. He seems simply to have remained in the condition of a political Barkis, always "willin'," occasionally doing that

which might help his re-election, but quite as often that which could not. The Third Term cry was started by the New York *Herald* as a sensation. It was at first pooh-poohed by the *Tribune* and other journals until the time came when it appeared to afford an opportunity for arousing the public mind. To the President the idea was pleasant enough; and he failed to see, as did many an abler politician at first, what a weapon it was against the party. That he should open his mouth he did not think at all necessary, especially when the men around him kept flattering him with the belief that a re-election was perfectly possible. Incapable of reading the men by whom he has so often been deceived and made use of, he could divine no danger in the cry. His friends and followers took it up. It has been the strength and at the same time the weakness of Gen. Grant, that his appointments to office from the Cabinet down have been mainly of men who owe their places less to merit than to him. They realize this if he does not, and they know well enough that as they rose with him they must fall with him—that when he to whose whim they owe their places shall pass from power, they must go too. To such men the cry of Third Term gave life and hope, and they took it up and swelled the chorus with a will. When South Carolina re-nominated Gen Grant, there was a chance to speak that could not come again. The talk by that time had demonstrated how distasteful to the masses of the people the idea of a third term was, and it was already then evident that the question was one on which, if it was forced to a decision, the party must split between the politicians and the people. The occasion was “dignified” enough. A State as prominent in national history as Pennsylvania had spoken by its convention—a body nearly as dignified as that which lately made lively the streets of Lancaster—and the opportunity to have said in twenty words that he did not intend to be again a candidate could not have been better, or the time more fit. The President said nothing. When the election took place in New York, the newspapers had taken up the matter with such vigor that the obstinacy of the President was aroused and “reticence under fire” became a principle with him as “irremovability under fire” had been before. He would not speak at the bidding of the newspapers. He would see them puzzled or mistaken—first. And so he held his peace. It strikes the impartial observer as a pity that the dignity which permitted

Gen. Grant to speak in time to relieve of the burden Gen Hart-ranft, who was nominated with the kind concurrence—not to say more—of the Mysterious Pilgrims of Philadelphia, forbade him to remove it from the worthy shoulders of Gen. Dix, who was nominated in spite of the Custom House Ring of New York city ; but this, perhaps, were to inquire somewhat too curiously. He held his tongue—the third term cry was raised—Gen. Dix spoke his mind too late in the canvass to do any good, and was beaten. Now that the President has found a tongue, what does he say ? Not that he adheres to the unwritten law, which,—stronger in the American heart than statutes, though passed by a Force Bill Congress,—forbids a man to be President three times, and would with our traditions make such a re-election amount practically to a revolution: not that he will under all circumstances decline the use of his name: not that he believes the principle of a third term bad or dangerous: but that he don't wish a third term more than he did a first, which was not much, as he gave up a position for life which he liked, with the emoluments which he needed, for four or eight years of the Presidency ; that after all nothing but a constitutional provision can prevent the people from choosing a man three times if they wish ; and finally that great danger might result from depriving them of this power—adding that for himself he would only accept the office under extraordinary circumstances, “which are not likely to arise.” Who would be the judge of these “extraordinary circumstances,” were a convention, made up of office-holders and controlled by the carpet-bag element of the South, fresh from encounters with “banditti” and stimulated with the history of fresh “outrages,” to tender a third nomination to the author of the message on Arkansas affairs, the President does not explain. The letter doubtless means very truly, as it says, that a man cannot make himself President a third time against the wishes of the people ; that the writer is no more desirous of the Presidency now than he was at first when patriotism compelled him to take it ; but that if a convention chooses to ask him to do so—especially him who has had the unselfishness to give up the life term and large emoluments of General of the Army, for the short term and smaller emoluments of President—he ought to be allowed to accept if he wished ; the sickly sentiment of the American people, and the example of the late G.

Washington and other dead men, to the contrary notwithstanding. The practical result of the letter is good. It is much better for the party, if not for the President, and it certainly relieves the former of a load. It is not, however, the utterance of the President which has killed the Third Term. It was dead as a political project long before he wrote that letter, and only remained up to that time, like that relic of another defunct with which Samson of old once did great slaughter—or like the remains of unfortunate cats at Abolition meetings before the war—an effective weapon in judicious and determined hands. It was decided many months ago by the sober second thought of the people, that great as had been the military services of General Grant—and nothing that he has done in peace has made us quite forget them—a third term has been out of the question for any man since the day when Washington set the unforgotten example. The American people has not lost its respect for the traditions which have made its glory, and until it has, as well as the spirit which the fathers bequeathed to it, it will be enough for the most worthy of its citizens to have sat twice in the chair of Washington.

AN opportunity to have opened the door of the Republican wigwam for the return of many Liberal and Independent sinners was lost in Ohio by the defeat of Judge Taft. The “lamp held out to burn” vigorously for a time, and more than one prodigal had made up his mind to exchange the husks which Democrats and others out of office had long been eating in his company, for a slice of the Republican calf, fattened on patronage, but the chance slipped by and will come not soon again. Gen. Hayes is a good man and a fair candidate. Under him the campaign will not be marked with any new meaning or enthusiasm. There is a reasonable chance of beating the Democrats should they take no new turn or no more advantageous ground. The struggle will be an interesting one, as Ohio will be the first State to lead off in what may be considered the opening of the Presidential battle.

THE work of the Lancaster convention was simply that of endorsement or confirmation. Indeed, so clock-like was it in the regularity and deliberation with which it struck the hour that

had been awaited, and fired off the alarm that had long been set, that, to irreverent minds, it suggested the possibility at some not distant future of making candidates as we do most other things—by machinery. Governor Hartranft has been a fair governor, and has no doubt disappointed many of his enemies. That he is not the kind of man whom many men have seen and would like to see again in the gubernatorial chair, and that the most that can be said of him is negatively good, is also true. The worst thing, however, is that he, like many another even better than himself, represents some of the most dishonest men and corrupt influences in Pennsylvania politics. The very worst of the ring leaders in Philadelphia and Harrisburg are enthusiastically enlisted in his behalf. He was chosen by them and nominated amid their cheers, and while there may be much that is good in the man himself, we are coming upon times when one's company is beginning also to be considered. The lines are being drawn day by day, and the double service of God and Mammon is growing hourly more difficult. Mr. Rawle is a reputable man of whom little is known. He also is believed to be personally honest. The fact that he was the choice of the gentlemen whose financiering has been for years operating in and about the state treasury, may not strengthen him as a candidate with some querulous people ; but it is said that he will not abuse his office himself—which is something handsome to say now-a-days about State Treasurers. On the whole, that anything more balmy than the present nominees could have come out of such a Gilead as Philadelphia did so much to create at Lancaster, was not to be expected, and no man hoped for it. The early holding of the convention secured these nominations without trouble, and all hands are waiting now to see what the Democrats will do. Such a body as the Lancaster convention, or to speak more justly the majority of it, might have done so much worse than it did, and could have done so little better, that there is no disposition to find fault. Attention has been directed to the fact that both Hartranft and Rawle, like many recent Republican candidates and a large proportion of Republican "managers," since that party has been fixed in power, were both Democrats a few years ago ; but it is not to be expected that the Erie Convention will return the compliment. An exchange of courtesies of this kind

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would be too millennial in its nature. Of the result it were folly just now to predict. The State is certainly a doubtful one.

THE Union League is at last aroused. The committee appointed by the Board which was elected last fall, has taken the bull by the horns most effectually. When the Republican members of Councils nominated for the offices of Guardians of the Poor (which, by the way, had been made vacant by a masterly strategic movement of no less a soldier than City Solicitor Collis) two individuals utterly unworthy, and objectionable on private as well as public grounds, it was supposed by many that no notice would be taken of the matter except by the *Times*, Col. McClure's newspaper, and one or two other papers of spasmodic independence. To the surprise of the community, however, the committee of the Union League adopted and published a dignified protest, couched in unmistakable terms, appealing to the councilmen to reconsider their action. For several days there was much excitement, the unwonted vigor of the League (which has generally contented itself with adopting virtuous resolutions in time of peace, and surrendering to regulars at the first evidence of war) astonishing and delighting its friends. A disposition for a moment to pause was evident among the councilmen; but the demoralizing results of yielding to the protest of the League struck the sagacious minds of the leaders at once, and an order was given to close the ranks. The members of the ring are so bound up together that if you strike one you strike all—if you hit the lowest the highest becomes alarmed—and the sturdy blow dealt by the League was felt all along the line. For a moment it seemed to waver, but presently the ranks were closed and the indecent nominations confirmed. Upon this the committee reassembled and adopted a set of resolutions strong enough to satisfy the most radical opponent of the ring. Recognizing as a fact that there can be no compromise between the men who rule Philadelphia and have captured the machinery of the party and the honest masses of the community, and that until the present rulers are driven out there can be neither peace nor safety for the people, the committee on behalf of the League accepts the issue and declares a vigorous warfare, calling earnestly on all honest citizens for support. That it will receive it, there can be little doubt. The community will

gladly welcome the chance and rally around the League as it did in the war days. The cause is the best—the opportunity has been offered—and this time, at least, the committee of the League seems to be ready to seize hold of and make use of it. Whatever the result may be, the courageous attempt of those who lead the committee to strike this blow at the present rulers of Philadelphia, for the sake of their party, their fellow-citizens and good government—in spite of the innumerable obstacles which surround them—deserves and will one day receive the thanks of every honest man.

THE POLITICAL OUTLOOK.

“THERE are in this kingdom,” Oliver Cromwell told his second Parliament, “honest and faithful men, true to the great things of the Government, namely the liberty of the people.” The more there are of such men in any nation, the better for it; when they are strong enough to control its policy, it goes well with that nation—when not, ill. In Cromwell’s opinion, they were the only class to be relied on in times of distress, and the only class to be considered in times of taking peaceful counsel. He governed England by making it his study to learn what they wanted—what was the best will of the nation itself. In every living nation—which, we take it, includes this American one—the convictions of this kernel class, the class governed by honor and principle and by the best wisdom accessible, are those which are sooner or later to become the national creed.

Very clearly this class is not identified with either of the two great political parties, which at present embrace the vast majority of American voters. Its more consistent elements refrain from formally identifying themselves with either party. The rest may act with one or the other; but party allegiance sits very lightly on them. They feel that they can never “belong to” any party, without ceasing to belong to the truth—without sinking their moral individuality, and becoming, instead of persons, members of a crowd. They are the torment of all good party men—asking questions which should not be asked, and doing things which

threaten discipline. In times of great public danger, they are ready to ignore or postpone smaller issues, and cordially cooperate with whichever party seems most in earnest to meet the present perils. But when the stress of the danger is overpast, they are apt to break ranks, or take up a critical attitude as to its men and measures. The true party man is as much vexed and bothered by them, as is the hen who sees her little brood of ducks take to the water. He cannot calculate the formula of their movement, because he does not judge things by an ethical standard. To him the success of the party is an end in itself. He will sometimes lie and cheat for it; in other cases he will wink very hard, while the lying and cheating in its interest are going on. He will read with satisfaction the editorials which throw mud and filth on honest men not of his party. He will help to patch up bad reputations, and to cover up ugly facts, for those who do belong to it. These things are part of his consistency; he cannot be heartily a party man without doing them.

For obvious reasons, the numbers of those who have separated from the regular parties, or who have become their critics while still their members, has increased very considerably during the last few years. The Republican party—once the party of Reform and of moral aims—has especially suffered in this way. It has only itself to blame. It has persisted in preserving abuses, as the instruments of party domination. It has made itself subservient to personal aims and influences. It has cherished that party spirit, which excuses and whitewashes the sins of all “regular nominees,” and excommunicates all who criticise, protest or dissent. To sum up all in one word, it has imperiled its very existence by allowing to “Grantism” the triumph it has enjoyed during the last seven years.

The existence and rapid growth of a third and unorganized party—we shall call it for brevity the Opposition—is accepted by many, who seem to regard its unorganized state as likely to be permanent. They look to see it keep its place as the independent and informal critic of the men and the measures put forward by the organized political bodies which are already in the field. They appeal to it to cast its suffrages wisely and conscientiously in the selection of the best men on either ticket, and in bringing an independent public opinion to bear upon the maxims and

measures of both. But they look forward to no united political action on its part, and hope nothing from its organization.

But the unorganized condition of this independent Opposition can only continue until two conditions of organization are complied with—its growth to such a force of numbers, as will make political action feasible; and the formation of a body of common *positive* convictions, around which it may crystallize. At present we are convinced that it is rather the second than the first that is wanting. The strength of this Opposition has never been really felt and evidenced, because no fit occasion has ever been offered. The only issues upon which its suffrages have been asked, were complicated with other matters. The only leaders under which its forces have been marshaled, have been persons who have been, for one reason or another, objects of distrust and suspicion to a part, at least, of its members. It has been tried, again and again, to sharpen very "private axes," by making the Opposition turn the grindstone, and to grind the grist of this or that great or small statesman by the force of its public opinion; and when the effort has failed, the weakness of the Opposition itself has been inferred—rashly, we think. It is not a body that can be led by the nose to the polls, or that will follow a watchword. It has been strong enough to defeat men of notorious character who had secured the nomination of one or other party, but its enthusiasm over the difference between two uncertain shades of gray has not been so vigorous.

Hence, we think, the general failure of the actual attempts to organize a third party during the last three years. They have generally been in the interests of Congressman X, or Senator Y, or Governor Z,—all of them or most of them men of probity, who had been ill-treated by the party they had left. But whatever the published platform might say, it was known and felt—no one who heard the candidate's speeches or talked with him could help feeling it—that the chief plank in the new platform was the personal grievance of the man who had been placed on it. To redress that grievance, to lift him again to place and power, to "rebuke" etc., etc.,—might bring him the millennium in the shape and the quantity that he most desired; but the aims of the Opposition would be as far from attainment as ever. Enthusiasm in such a cause would be a dreadful waste of good powder.

All these movements have been organized, not by any popular uprising for great ends, but by little groups of professional politicians with a personal grievance—"soreheads"—and

"Nor kind nor coinage buys
Aught above its rate." (Emerson.)

Out of soreheadism will come no great party of living convictions and moral aims. The men who have sat in the old councils, and daubed themselves with the old paint, and swung the old tomahawk, may wash themselves clean, and shake the dust off their feet, but to no purpose. The popular distrust of them, or of all but a mere handful of them, is too profound to admit of popular enthusiasm in their behalf. And the young men who fall into line behind their banners and think of marching on to victory, and through victory to political eminence, are simply creating for themselves a political record which will be a clog and a hindrance to them all their lives.

All considerations lead us back to the same point: the Opposition is not an organized party, because it lacks the organizing convictions and principles, through whose force a new party is crystallized and takes shape. It is as yet a merely critical body, with abundance of individual conviction and principle, but with none that furnish a practical bond of union. No "movement" can or will furnish these, until the body itself moves and shapes its action to some definite end. It may be thought idle speculation to ask what direction this action ought to take, or is likely to take—what principle it will enunciate—what name it will bear. But if our statement of the present situation and its immediate possibilities be not utterly mistaken, then there is no other question so well worthy of our thoughts at this present.

Not, therefore, in any special interest, but in that of the whole nation, as far as we understand it, we would endeavor to cast the horoscope of our political future, and to forecast the action of these best elements of our voting population. We would not undertake to say when, or how soon, any action will be had, but merely to indicate what we think should be its direction. All human counsels have in them an admixture of unwisdom and weakness; the best are no more than approximations to the truth. But the truth is a reality; there is an absolutely best course for each nation in any conjuncture of circumstances; and whatever

casts even the faintest light upon the problems of to-day, may be of great service. And on the other hand, the possession of the best moral convictions and the noblest aspirations by the Opposition, is no guarantee for wise action; as a rule, the former has never led men directly to the latter, and it is a saying as true as it is sorrowful, that "the children of this world are wiser in their generation than the children of light."

We believe that both the earlier and the later history of our country alike suggest to the new party the question—How shall the American people become, in their political organization and methods, more really and truly a *nation*? That we are such in unity of will and of feeling, there is no room for doubt. Sectionalism received its death-blow from the war. The spirit then destroyed had been cherished for the previous sixty years with the utmost assiduity. It had been the very genius of the political party which had been longest dominant in our national councils; the opposition to it on the part of the opponents of that party was weak and imperfect. It had become a sort of recognized tradition, which had the sanction of the laws and even of the Constitution. It had the sanction of the greatest names—the boldest theorists. But it was consumed in the flames which its own champions had kindled, and while it still lingers in the minds of a few of the politicians of the old school, it finds no response in the minds of the people. No man who appeals for the suffrages of the people to-day dare tell them "I am first a Pennsylvanian, and then an American." The old utterances that spoke of "the authority of sovereign states" are become so rare that we hail them as the remnants of an age as distant as those of geology, or regard them as we would "a blue-light Federalist" still alive and vigorous. Local jealousies do grow out of the struggle for commercial pre-eminence between this and that city; but they no longer affect our national life, or assume any political dignity. We know and feel that we are one people, and we feel it to the very marrow of our bones. The right Hon. H. C. E. Childers, member of the British Parliament for Pontefract, in a recent address to his constituents, compares what he saw in the United States just before the war with what he saw during a visit made very recently. He says that he was "struck with this—that whereas, when he was there before, people used to think and say a great deal about

their being citizens of particular states, now there was hardly anything of that heard in America. He never heard, during his stay, any one make reference to the politics of any individual state, or any one put himself forward prominently as belonging to any particular one. The feeling now in America is, 'I am an American citizen, I am a citizen of the United States.' The imperial [national] feeling is discarding, to a certain extent, the merely local feeling of former years. Across the Atlantic they feel that they are mostly and chiefly Americans, and thus they have made great advance in national sentiment." This is but a correlate of the broader fact, also noticed by Mr. Childers, that "before the war the full extent of national feeling had not been developed, and America thought far too much of what others were thinking and saying of her." But now the people "seem to have acquired a thoroughly imperial and national character," and to have "grown in national confidence," feeling themselves "thoroughly independent, not only of foreign force, but of foreign opinions."

Not that this change of feeling and sentiment was produced by the war. It was growing through all those sixty years of the predominance of those who formally discouraged it. It was fostered by many of their own acts, such as the annexation of Louisiana and the second war with England. It found its boldest and most popular utterance in the words of some of their most honored leaders. But in the late war, the iron that had been gaining heat for six decades flashed red and white in an instant. We came to know what we were and aspired to be, and the national sentiment

"Sprang full-statured in an hour,"

and to-day we are a nation in a vigorous and full-grown national existence, while our institutions represent an earlier and less developed stage. We have the Constitution of 1789, and the national life of 1875, and "the place is too strait for us." The limitations and qualifications by which the past sought to perpetuate itself, have ceased to be even possible for us. Much as we revere the work of those who planned the fundamental law of our national administration, we know that that work cannot abide forever. Its spirit may be transmitted to new forms, but the forms themselves must perish. The man cannot continue to wear the clothes of the boy.

To illustrate what is meant, let us turn to the parallel histories of other nations. The kingdoms of western Europe, especially that of England, grew up in pretty much the same fashion as did the United States. The original political unit was a tribal group, which might be compared to the individual settlement or town on our own soil. These were by degrees united in larger political units, and these again in still larger, until the entire territory of the modern kingdom came under the authority of a single sovereign, and of a single legislative body. The mark gave place to the hundred, the hundred to the shire, the shire to the kingdom, and the lesser kingdoms were united into one monarchy, which by degrees lost all consciousness and all prominent traces of its earlier divisions, and became, in the true sense of the word, a nation. Suppose that on the eve of the formation of the English monarchy, "Articles of Confederation" had been drawn up, and that a few years later these had been superseded by a written Constitution, because the need of a still closer union of the parts was felt; would the English people have shown the highest political wisdom in insisting that the restrictions then imposed upon the king and the national Witenagemot should be forever perpetuated? Would they have been loyal to their nation and faithful to their national vocation in so doing? Would the constitutional growth in freedom and political organization, which is England's distinctive glory, have gone forward as it has done? Would they have derived from times of crisis and danger the same benefits, and have perpetuated equally the new and more vigorous growth of patriotic sentiment which those times of trial called forth?

But just such is our situation. The Constitution of 1789, with its adjustment of powers and responsibilities, if considered as a final and permanent arrangement of things, is a great arrest of national and institutional growth. Our history up to that date was substantially that of Saxon England. Smaller political units had been continually gathering into such as were larger, until the thirteen historical "colonies" were the political bodies which occupied the entire land, and united in the Declaration of Independence. Those colonies had been thrust into even closer union by the stress of circumstances. In spite of great variety of origin and of social character—in spite of difference of domestic institutions—in spite of local jealousies—in spite of the especial favor

shown to a few by the mother country—they had been brought, step by step, to unity of action based on unity of interest. Their first attempts at organizing their union betrayed their jealousy of their independence. They created a sort of advisory conference, in which they, as political bodies, should concert united action, chiefly for the common defence. The attempt failed; they could neither go back to separation nor remain so united. The great drift of the country's history was bearing steadily in one direction—to closer union. The late Prof. Henry Reed has admirably illustrated these facts in his little work on *The American Union*. Then came the Constitution, which embodies a compromise unique in history. Not the States now, but the people of the States, create the new government. But they do not create a political authority which shall supersede the old and take their place; but only one whose power shall be so much of the political authority as is taken from each of the States. Everywhere else in history, with the unhappy exception of the old German empire, the political body, the State, the institute of rights, is one body; the attributes of sovereignty are vested in one government, and within its domains only municipalities exercise authority. But in America we have not only an *imperium in imperio*, but at the very start thirteen, with provisions for their indefinite increase. The old States were perpetuated, not as municipal bodies, but as political sovereignties, with many of the very highest attributes of political authority still secured to them. The very organization of the general government recognized the fact. Unequal representation was introduced into the national legislature, that these sovereign States might sit and vote there as equals; and the choice of representatives from each State was confined to its own citizens.

The compromise was open to many grave theoretical and practical objections from the first, but all its provisions found their sufficient apology in the fact that its authors could do no better. The sense of national unity was not strong enough to enable them to dispense with this perpetuation of colonial methods and institutions. They had to cut the coat according to the cloth, and they did cut it with admirable skill and prudence. There is hardly any fault to be found with the way in which their work was done, but it is greatly to be regretted that the work itself has been

idolized and magnified in the way which has been customary for now eighty years. A quasi-sanctity was first imparted to it by the official oath exacted of persons in office. This oath, we take it, involves no more than the pledge to resist all illegal attempts to set aside or alter the constitution, which itself provides for legal changes and sets no limit to their extent. The form of the oath should express the real meaning. It then became the idol of the party, whose *raison d'être* was the perpetuation of those colonial divisions and "state rights" which it sanctions. The fear of a threatened collision between the sections of the country who were supposed to be parties to the compromise it embodied, created a certain enthusiasm for it as the Palladium of the national unity; and the not unnatural nor undeserved hero-worship with which a great number of its framers were regarded, caused it to be encircled with something of the same halo of historic glory. It was forgotten how entirely different was their own ideal of a national government, and how completely they were governed by considerations of present policy and present necessity in its formation. Thus have we come, bit by bit and step after step, to entertain a regard for our chief legal document which must be classed among the superstitions peculiar to a civilized society. To most people it is simply identified with the national existence—is a sort of heaven-descended code, to question which were blasphemy. They think of it as that which *constitutes* the nation, rather than as the constitution of the government merely. The nation existed before it and without it, in the people's will to be *one* people. That it will exist after the present Constitution has been utterly abolished or fundamentally changed, is our assured belief.

Nay more—the nation has existed and does now exist in spite of its Constitution of government, rather than by virtue of it. The war of the Rebellion presented problems which the framers of the Constitution had never contemplated. If they had foreseen them, they would have pronounced them insoluble.¹

They were solved by mother-wit, not by law. The national au-

¹In the present writer's view, secession was always illegal and unconstitutional after 1789. It was allowable under the Articles of Confederation which were formed by the States, but not under the Constitution to which the States as such are not parties. In the language of German political philosophers, the United States was not—as Calhoun thought—a *Staatenbund*, but—as Webster

thorities said, "We are a nation, and the national unity must be preserved at all hazards. No document must stand in our way in doing it. If the Constitution does not give us room, we must act *outside the Constitution.*" The man put off the boy's clothes "just for this once," and had that fight out; and then proceeded with great and compulsory pains to force himself back into them. But he can't stay there. On every side of us, North as well as South, East as well as West, among the mountains of New Hampshire as well as at the mouth of the Mississippi, we have the same local confusions and conflicts arising, which no local authority is competent to settle. We have both parties appealing to the national sense of right, while the national authority has no legal method of interfering, and is continually blundering into those that are illegal. The confusion worse confounded of the Louisiana conflict could not have arisen, had it not been for the ingenious complexity of duties and responsibilities which both compelled the national government to take some action, and prevented such action as would be both prompt and efficacious. That Gen. Grant's action has been the wisest possible, we do not believe; but neither do we think that any president could have carried out a satisfactory and statesmanlike policy in such a case. It is impossible to govern wisely and effectively, when the institutions and methods of government enable a few factious persons to thwart the national will. The notion that popular freedom can be secured by ingeniously tying the hands into which the popular choice has put the responsibility of the national welfare, is one which the world is rapidly outgrowing everywhere but in America. With us it owes its popularity partly to the influence of English *doctrinaires* of the Whig school—partly to the fact that it furnished a convenient plea to the semi-national party.

The change that must come sooner or later will abolish all political authority inside the nation, except that which centres in the National Capital. It will reduce the state governments to the rank

maintained—a *Bundes-Staat*. But it was not thoroughly and consistently the latter, or else it would not have submitted the new Constitution to the votes of the States as such, nor would it have admitted the principle of divided sovereignty within the national domain.

of municipal bodies, whose powers and duties shall be defined by the national government, and whose acts shall be subject to its revision. It will give the nation's Congress the same power over all the national interests as is now wielded by the British Parliament over the British Empire.³ It will establish one body of civil and criminal law in every corner of the Union, and will tolerate no courts of higher than municipal rank, besides those of the nation. It will thus make a seat in Congress, or on the Bench, a place of such dignity and power, that all the best men in the land will aspire to it; and a place of such responsibility and prominence that weak and wicked men will—as a rule—shrink from seeking it.

One of the lesser reforms will be to abolish the existing local restrictions on election to office. Every citizen of the nation should be eligible to any office in the gift of his fellow citizens, and none should be excluded because he happens to reside in some other section of the country than that which is willing to elect him. The existing restrictions in this matter are thoroughly mischievous. That they sentence locally unpopular men to banishment from public life, is the least of their bad effects. They give national sanction to the wretched notions which Burke so eloquently combatted in his "Speech to the Electors of Bristol,"—that the members of the national legislature are local delegates, appointed to push local projects, look after local interests, and reflect local prejudices, rather than the representatives of the whole nation, pledged to think first and last of the whole nation's welfare. This provision may be traced to the same source as others to which we have taken exception. It grows out of the plan of creating a new national political body, without removing the old, whose place it should have occupied. It is a logical consequence of that plan, that the representatives of the localities should be chosen from among their residents.

³Let us hope that it will also give us a national name, instead of a clumsy, descriptive, five-worded designation like "The United States of America." "America" itself would be quite enough, and it is the name now generally assigned us not only by Europeans, but even by our Mexican and Canadian neighbors. Such changes are quite common in history—England, France, Germany, Holland and many other countries, have thus altered their national designation.

All this may be regarded as a plea for "centralization," a word which has come to mean any adjustment of the relation of local to national government that is displeasing to the person who uses it. There is a very great deal of the worst sort of centralization under the workings of the Constitution as it stands; the national authorities have acquired a power to control the political action of the various districts, to a degree which is both dangerous and ominous. They have acquired the power to make themselves independent of public opinion, by commanding the support of a pledged body of supporters in every district, whose prosperity and position is made dependent on their will. This is the sort of centralization really to be feared; all the guarantees as to the distribution of power which the Constitution could set up, have been powerless to prevent or remedy it. In spite of those guarantees, our civil service has become worse than the bureaucracy of Germany, and comparable only to that of the late French Empire in its corrupt and mischievous efficacy. This system, again, is the especial creation of the semi-national party, the party of "strict construction." Their great authority, Thomas Jefferson, began the mischievous practice of arbitrary removal from office; their great hero, Andrew Jackson, carried it to completeness; the party itself was the first to adopt the principle of "rotation in office" and the maxim "to the victors belong the spoils."

And while the Republican party has adopted the wicked and corrupt traditions of its rivals in this regard, and has itself become wicked and corrupt in consequence, it is also true that within the Republican party there has arisen a strong and most creditable opposition to those traditions and the whole system they embody. The "Civil Service Reform" movement has been forced upon the Republican leaders by men in the Republican ranks. That those leaders have merely coquetted with it and have striven to make it ridiculous, is unhappily true; but no Democratic administration was ever forced to go so far. Unhappily, the Reform was proposed and advocated in a shape which laid it open to ridicule. The reformers were misled into proposing that the measures recently adopted for the reformation of the English Civil Service be transplanted to America, viz: that all appointments be based on the results of a competitive examination. They thus identified the very questionable merits of that system of ap-

pointment, with those of the reform itself. They could not more effectively have played into the hands of their enemies; no series of questions could be proposed for such an examination which did not fairly tempt the small wits of the "regular organs" and some other papers to turn them to ridicule. Never was such an unflinching fund for newspaper jests; and we believe that there was truth, as well as sport, in the objections, whatever their motive. China has had this system of appointments for ages upon ages, and the Central Flowery Land is certainly not the favorite example of a well governed and well officered country. Even England has found that the new method is not all that it was promised to be. It has a way of sticking the round pins into the square holes, and *vice versa*, which has been found disagreeable; and the government commission, of which Dr. Lyon Playfair is the chairman, proposes to class pretty nearly all the more important offices as "staff appointments," and to vest the selection of their incumbents in the government. Political machinery, like all other machinery, does not enable us to dispense with the use of brains.

As in most cases of transplanting an exotic reform, our Civil Service Reformers proposed that we should take the second step (whether wise or unwise in itself), before we had taken the first. To bring our civil service up to the level of the unreformed civil service of England, would have been a sufficiently large undertaking, and one that is far more urgently needed by the country. We need to get rid of the vicious system of removals, far more than to control and regulate the appointments. We need to have written in our fundamental law, that "no person appointed to and confirmed in any civil office—the Cabinet and the Diplomatic service excepted—shall be removed from the same except for malfeasance or proven incompetence, or by promotion or superannuation." That would very soon reduce the number of appointments within such limits that public opinion could be brought to bear with force and intelligence upon each and every single appointment. It would greatly increase the care exercised by the Senate in the scrutiny of the character and qualifications of every nominee. It would make the office-holders independent of the central authority in everything but the discharge of their official duties. It would disband the great political brigade of office-holders, and the still greater brigade of office-hunters, whose existence adds to every-

thing but the dignity and the honesty of our elections. It might even make the election of our chief magistrate an occasion of deep yet subdued interest, instead of a quadrennial paroxysm of national insanity. It would render a great reduction of salaries possible, by making the office better worth having with a smaller income than at present. It would make official speculation as rare as in business life, and would secure to the nation the services of a great body of experienced men, who would soon take a high rank and exercise a most beneficial influence on society.

And when once the centralization of official slavery was abolished, all other sorts of centralization would do little harm. The will of the people in the selection of their representatives would no longer be overridden by governmental influences; they would have a far better opportunity to make the weight of their opinion felt in regard to every thing on which they have an opinion. Not that the millennium would come at once; not that all the unwisdom and all the selfishness would vanish out of our politics; but at any rate, we should no longer be supporting at the public expense a body of active partisans, whose function it is to choke into silence whatever of wisdom or public spirit in the party does not chime with authorized and "regular" opinions. All that can fairly be expected from any reform in political and social methods is that these may be so altered as not to set a premium upon wickedness and folly.

The new party, if moving forward on these lines of action, would find the same tasks at its hand as regards the industrial life of the nation. It would meet the same question as before, but in another shape—"How shall the American people become individually, as well as politically, more really and truly a nation?" We think the only answer possible is this: "In the equilibrium of our great industries." When our people are independent, alike of foreign producers and foreign consumers, as regards all the great staples of agriculture and manufactures; when our commerce is chiefly the interchange of services between different districts of our great country; when our industry has been brought to the highest point of variety and consequent interdependence; when we have work for all idle hands, and good food and clothing and houses for all classes, we shall be no longer a nation setting up in business, but one already set up. A truly Nationalist party must

follow a truly Nationalist policy, in this regard as well as in others. It must aim at the maximum of national life, industrial as well as political, as the end of its endeavors.

That the Opposition, as it now exists, is at all of one mind on this subject, cannot be asserted. It embraces men who stand as far from each other as did Horace Greely and Carl Schurz, or as do Henry C. Carey and David A. Wells. Here again, many have caught the infection of foreign reforms, and are trying to induce this nation to take the second step before it has taken the first. That the United States will yet proclaim Free Trade with all the world, and find its interest in so doing, we have no doubt whatever. All sensible Protectionists look forward to that day with hope. Nor will we need England's five centuries of Protection to prepare us for it; five decades of such growth as is recorded in the Ninth Census would be probably quite enough. "It is a country," says Mr. Childers, "where there is little or no pauperism—where hardly any one is poor except by his own folly—where labor is easy to be got and well remunerated, and where there are all the facilities for saving the results of that labor, and for advancing from one stage of life to another. Not only is America in this respect probably at this moment, in spite of the difficulties of the last year or two, the most prosperous country in the world, but she has also succeeded, notwithstanding the war, in building up out of the gain and profit of the succeeding years a larger amount of material and exhibition of wealth, and of permanent buildings and means of ornament and enjoyment, than any country has done in the same time, he believed, since the foundation of the world." Protection, we all feel, is to a certain extent abnormal and unnatural; but it is rendered temporarily necessary by the inequality of industrial power and capacity which exists between countries of equal industrial ambition and purpose. Yes, protection is abnormal, as clothes are abnormal; and were man back in Paradise, bare skin would be the fashion once more. When we are well into the saddle, we will cease to protect, because tariffs will be as needless as laws to regulate the tides; perhaps, like most Englishmen, and some Belgians and Germans, we will then begin to preach the beauties and glories of Free Trade to those weaker and less-advanced nationalities, whose infantile industries need an extra blanket.

A great part of the Opposition are, we believe, Free Traders; perhaps it contains a majority of those who are such by conviction, and not merely by tradition. We fear that nothing but a little experience will ever convince some of them, that the brilliant and relatively true theories of their party, will not work in this wretchedly irregular and unequal world, where the lines are not drawn with rulers and compasses, and where ragged edges are rather the rule than the exception. In their propaganda of the doctrines of European economists we fear they are likely to meet with some disappointment, for reasons already noticed. Without getting into the folly of supposing that "America is such a big new country that she can dispense with the lessons learnt elsewhere by experience," we have got so far—Mr. Childers says—as to be "independent of foreign opinion" on national questions. Most of the arguments heard from the very barren and unoriginal body of writers who represent the English school in America, is nothing but a ceaseless harping upon foreign opinion, as settling the whole matter.

But, finally, the new party must do far more than all this for us, if it is to do anything worth the having. It must give us a new national morality, as well as a new constitution of government. Institutions and the moral force which shapes and originates them are related as are cucumbers and sunbeams. It takes a good deal of sunbeam to make a cucumber, but the quantity that can be again extracted from it is very limited. This and that change in social method has been won for us by the tears and blood, the groans and fetters of a thousand martyrs for freedom. But it does not prove equal to all the great things that were hoped from it. It is well that the martyr's virtue was its own reward; well that all the sufferings of a people struggling on to freedom have been repaid in the higher type of their character, in the growth of their social virtues. Free speech, freedom of the press, free parliaments, trial by jury, reform of the representation, abolition of slavery,—what glorious millenniums they were to bring us. But the millenniums are not yet forthcoming; though in saying so we would not for an instant concede that one morsel of the effort to achieve these was wasted. It was at least repaid in the growth of moral muscle, in a more vigorous national life, in all the things that are the real possessions of a people.

But we ought to have got far enough in our experience of reforms to know that cucumbers are not inexhaustible repositories of sunbeams—that you cannot get all the moral force out of an institution that was put into it in its painful inception. We ought to have learned by this time that deep and pervading reforms are to be achieved by acting on human character, rather than by altering political methods. A new, a more vivid, a more natural conception of duty, is worth more to a nation than the best brand new constitution of its government.

And, therefore, our largest hope for our political future is that a new ethical spirit will be infused into our whole national life—that a new sense of a vocation and of a responsibility will be impressed upon the nation and upon its individual members. We have little hope from the churches of the land to this end. Here and there in the length and breadth of the land are a few prophet-pulpits, which proclaim that the chief end of man is not to save his own soul; but they are few. No broad and national morality is taught by the churches; they think their duty done when some special exposure of political immorality is saluted with a few stereotyped phrases of denunciation, or of lamentation over the corruptions of human nature. The Old Testament might as well be left out of the pulpit Bibles, save for the opportunity it affords of ingenious allegorizing.

It is to a Nationalist party and to no other that we look for such a moral reformation, such a revival of national morality, as will save us from corruption and national death. Such a party should take its stand on the conception of a national vocation peculiar to this nation, and such as must tax all its powers and energies adequately to respond to it. The world's history is not a meaningless chaos, that forever drifts nowhither. A great purpose lies behind it. A great unity binds it in one. The nations are the instruments of that purpose; and in so far as each of them does its own work faithfully, and fulfills its own vocation, the unity of the whole is attained through the variety of the parts. The whole body is fitly joined together by that which every member or part supplieth. It was the vocation of Greece to exemplify and illustrate the living force of human individuality; of Rome to elaborate and perpetuate the conceptions of authority and jurisprudence; of England to combine liberty and order, and to spread them over a

greater empire than that of Rome. It seems to us that the vocation of America is to take the things which have been elsewhere the privileges of classes, and which could not have been brought to their present perfection but for that restriction, and to make them the possessions and the birthright of all. This we have attempted as yet only in the sphere of politics and of elementary education. But whatever any class in the Old World has of worth and excellence, be it culture of mind and heart, or refinement of character, or delicacy of perception, or ease of circumstances, or opportunities of knowledge, is to be made as universal as free suffrage and common school education. For instance, the family and class feeling which has often been ridiculed as inconsistent with the character of a republic, is by no means so, but rather eminently fit and appropriate to it. If it mean a feeling confined to one class of society, and supposed to give them an excuse for despising others, then there can be nothing more un-republican. But there is no reason why the poorest class should not share in this feeling as heartily as the rich. Indeed, they very often do possess it, and with it the silly vanity which often but unnecessarily accompanies it. The American workingman should feel that *noblesse oblige*, as really as does the haughtiest resident of the Faubourg de St. Germain.

“Try that,” it will be said, “and you will only make the people dissatisfied with the sordid life they have to lead. You will unfit them for what they must be, without being able to open to them any new career suitable to their new education.”

We will not pause here to suggest what may be done to make common life less sordid by changing some of its associations and surroundings. Our chief trust is in the possibility of such a change in the character of the people as will rob them of distaste for any honest work. Out of the conviction that our nation has a calling and vocation must come the conviction that that calling extends to every individual citizen in his place and at his daily work. Men must be brought to feel that they also are serving their country, and serving the great purpose which lies behind their country's existence. They must learn that they also are helping on the great movement of society to its true end, when they do their work faithfully and well. They must feel in every-day tasks and unexciting duties, as the British sailor felt when he went into battle

with the reminder that "England expects every man to do his duty." Each must learn to increase his success in life by the actual results of his special work, and not by the amount of money that falls to his share. He must, every class and order of men must—as the higher professions still do—set up another standard of success than the money one. The merchant and the banker, no less than the physician and the clergyman, must come to feel that there are larger aims for him in life and even in his business than the accumulation of a fortune, and that his prosperity or failure is not to be measured by a bank account.

Till that time comes it is useless to look or hope for a permanent reform of politics. The office-holders cannot in fairness be expected to have a higher ideal of duty than that of the great man of society. If money-getting be the chief end of man, it will be his also. He will take an office to see how much he can make out of it; and however he may resolve at the outset to do all things honestly, he will find that that one false rule of conduct will bring him to many doubtful places where the line is not sharply drawn. He may keep on the safe side of the line by the force of a strong resolution guided by an educated conscience; but if he have not both, he will make shipwreck. And then a mammon-worshiping society will organize its vigilance committees, more or less formally, to drive him out of place and perhaps to a prison, for acting on the maxims which govern its own conduct. The reformation of politics must begin in the whole life of our society. The worst specimens of the politician class are at most the glaring likeness and illustration of the vices of the nation itself. And however disgusting Tweed and his like may be to us, it may well be suspected whether the angels are not more disgusted with the periodical fits of virtue in which we take vengeance on them.

JOHN DYER.

INDUSTRIAL ART EDUCATION.¹

THE general topic on which I have to address you is Industrial Art Education, and I propose to say a few words upon each of these three heads; *First*, what Industrial Art Education is; *Secondly*, whether it is possible to establish it in our public schools; and *Thirdly*, to tell you how it is thriving in the State of Massachusetts, where the subject is under my general direction. First, why is it that this subject, which for so long a time has evoked little or no attention, is especially of interest just now, and why is it that in almost every State in this country it is being discussed in one form or another? Having taken some trouble to inquire into the cause of this sudden increase of interest in the subject, I am led to say that it may be accounted for principally by the fact that within the last twenty years the people of this country have become a great traveling people. No other nation has so many travelers; the number of Americans going to and returning from Europe, at the port of New York alone, being from fifty to seventy thousand per annum. These persons go abroad for some specific purpose, sometimes for pleasure, sometimes for inquiry, and they come back with very definite impressions, which they communicate to the people about them. And it appears to me, that one cause of the general interest at this time on the part of educators in this subject of drawing, is the result of this habit of traveling abroad which has brought our educated people into contact with the school system of foreign countries. If you talk to any intelligent educator upon his foreign observations, you will find that while he details to you his examinations into the systems of education pursued in the universities, public schools and technical schools of other countries, he will seldom express dissatisfaction with the public school system of this country. Just as strangers, who come here from abroad, go back with very definite and very favorable impressions concerning a subject about which they learn more here than of any other—namely, the management and conduct of public schools—so

¹An address delivered by Prof. Walter Smith, State Director of Art Education for Massachusetts, in Concert Hall, Philadelphia, April 23d, 1875, at the request of a number of gentlemen connected with the University of Pennsylvania, the Franklin Institute, the Academy of Fine Arts, the School of Design for Women, the Social Art Club, and the Penn Club. Prof. Smith was introduced by Chas. J. Stillé, LL. D., Provost of the University of Pennsylvania.

Americans, upon coming back from Europe, while expressing satisfaction with American public schools, also express their wonder that the manufacturing and industrial communities of this country should have been able to go on so long and so successfully without that particular form of assistance to industry represented by Industrial Art Education. Then, too, a large number of Americans visit International Exhibitions, and, upon observing the products of other countries, comprised in the educational, scientific and artistic displays, are compelled in candor to admit that America has not taken that position in Art and Art Industry, which she delights to take in respect to some other subjects; and having seen their country at the foot of the column in these respects, some of them upon returning have sought to remedy this state of things. Thus we have in some of the New England States men who, after examining this subject abroad, have concluded that the time has come when there should be added to their system of public instruction the one feature which it lacks, that of technical education.

The progress of England in this matter, during the short time in which attention has been called to it in that country, is a subject of frequent remark. Those who visited the exhibition of 1851, for instance, saw a condition of Industrial Art in England, which was little better than a condition of barbarism. I have seen myself in the cottages of the laborers, and even in the houses of the middle classes, nondescript articles called ornaments—chimney ornaments—which were certainly not so far advanced in art as are many of the works of the Sandwich Islanders. They were simply barbarous imitations of animal forms, such as really were a disgrace to any civilized people; and the condition of public taste was so low that the old charge of the country being “a nation of shop-keepers” was really a fair charge. Then came another exhibition eleven years afterwards, in 1862, and those who witnessed both exhibitions saw an extraordinary change, not only in the character of Industrial Art, but consequently in the money value—and that was one important test—in the money value of the products of the country. This caused so much inquiry that even the great art producing people, the French, began to ask what it was that caused the great advance.

Then came the third exhibition, that of 1867, and it was then

conceded on all hands that in the essential requisites of value, of form and of taste in manufactures, and in the handling of materials, Great Britain was, in the matter of Industrial Art, the equal of any nation in Europe; and thus the country which in 1851 was far in the rear, had come into the front rank.

Such a change, and one brought about in so short a time, must be a matter of interest to ourselves here, who have just taken up this question; and therefore, before attempting to give you a description of what we are endeavoring to do in the New England states, I propose, with your permission, for a few moments, to describe to you precisely how that change was brought about in Old England. In the first place, there was a time when the manufactured products of Great Britain were very generally preferred in many countries, because they represented a certain quality of material; they were honestly made; they would wear; and there had been a certain monopoly in many kinds of fabrics and objects, in the manufacture of which honesty and skill alone were required and taste had little influence. But, toward the end of the first quarter of the present century, there came a change. People in many countries of the world who had put up with very ugly things because they would wear, began to require something in addition to the usefulness of the object—that it should be attractive. In 1836, the Board of Trade, looking at the question as one purely of a business nature, began to consider what should be done to bring back to the country the trade in manufactured articles which it was rapidly losing, and losing simply by want of taste in the manufacture. It was said that even the savages began to give up the wearing of articles of apparel made by English manufacturers. The Board of Trade took the matter up; not from any philanthropic impulse, to secure the extension of educational facilities, nor from any patriotic desire to excel in the arts as compared with other nations, but simply as a measure of self-preservation. And that is precisely the ground on which I advocate Industrial Art Education here. The first effort that was made to secure this return of trade was by the introduction of good design into manufactures. And how was that attempted? It was attempted in a way which, after fifteen years of trial, was abandoned as an utter failure. The first thing that the Government did was to assist in the establishment in all the great manu-

facturing cities of schools of design, in which instruction in designing and in drawing was to be given to adults, or to any young man or woman applying for such instruction; the applicants being required to be above a certain age. These schools were conducted from 1836 to 1851, and at great expense to the Government. In 1851, at the great exhibition, their influence was fairly weighed in the balance, and they were pronounced a failure. Although conducted by skillful teachers and supported handsomely by the Government, and having the localities in which they were situated in sympathy with them, the actual result was that they were pronounced a failure. Prior to the establishment of these schools, it was almost impossible to find a designer in any workshop or factory who had been born in the country. There were few exceptions to this rule; the simple fact was that if a designer or a skilled workman was required, he was imported; and it was thought that if the Government established schools of design and supported them, and if special industries requiring great skill were supplied with talented designers, the consequence would be that a remedy would be found, and English art would be elevated. But, as I said before, in 1851 the whole system was tested, and the test demonstrated it to be entirely inadequate to remove the evil of a want of good design.

Then came the testing of a second experiment, and this time the idea was advanced by a business-like educator who had given this question some consideration, that leaving out of view the fact of a want of patriotism in the nation in always looking abroad for sources from which to supply the brains and skill required in our home industry, the remedy could not be found in importing foreign designers, nor was it to be accomplished either by schools of design for adults or in giving them special instruction. He started with the theory that the only way in which we could remove the disgrace and furnish the manufacturers with a demand for, as well as a supply of, good taste, was by educating the whole people—by establishing a Museum of Art, training skilled students to become teachers of drawing, and insuring that every person born in the country should have an opportunity for developing his artistic taste—those having remarkable power to have the additional opportunity afterwards afforded them to display their special power, in technical schools of art and science. And here I would

remark that the mistake made in the first experiment was that the supply was given before the demand existed. The education of skilled designers to produce beautiful work was destined to be of little value if the people themselves were left in such a barbarous condition of public taste, that they preferred the bad to the good. If a vulgar taste or want of education led the masses of the people to prefer a bad design to a good one, there was no encouragement given to manufacturers who produced good work. A little incident which I will give from my own recollection will show you that this want of taste was not confined to the homes of the working classes, or of the middle classes, or to those places in which, from a lack of educational facilities, we would naturally expect to find it. One of the means by which the people were to be shamed into rejecting ugly things and choosing beautiful things was the public exhibition of bad designs; and with this object in view, an apartment was set apart in what was then a museum for all kinds of art (now known as the South Kensington Museum), in which bad designs, some of the very worst objects that could be purchased in the open market, were nailed up for public inspection. These the people were given every opportunity of examining, so that the more noticeable defects of a vulgar taste might be apparent and might eventually be more generally avoided. It was rather a dangerous experiment, because almost all persons who came into that room saw displayed some particular weakness of their own. Besides that, the defects were not confined to the objects or ornaments bought by the working classes. One of the objects on exhibition was a magnificent rug, manufactured by Sir Francis Crossley, of Halifax, the great carpet manufacturer of the West Riding of Yorkshire. It was an imitation of a picture by Sir Edwin Landseer called the Monarch of the Glen—a stag majestically rising from his native heath. This design was considered defective, inasmuch as a flat surface should represent flatness; and it was not considered in good taste that when we drew up in a circle round the family hearth we should put our feet on “monarchs of the glen,” rising up as if ready to spring upon us. In order to apply this to all classes of manufacture, the costly as well as the cheap, this magnificent rug was purchased and nailed up. Among the first to visit the exhibition afterwards was the manufacturer himself, who, upon observing the object,

quietly remarked to the directors, "I would recommend you upon the whole to remove that rug." "For what reason?" he was asked. "Why," said he, "it happens to be the hearth-rug which a lady in a most exalted position has just chosen for her own boudoir, and I do not think she would like to see it nailed up as a trophy of bad taste." I am sorry to say the Chamber of Horrors did not continue in existence for a very long time. The pressure against it was too strong. It did one good, however. It showed us that we could help to improve public taste by displaying what was bad taste, as well as by indicating what was good taste.

In the period between 1851, the year in which the inferiority of the country became most apparent, and 1862, a great change took place in the management of this educational matter. It was made possible, under the laws relating to national schools, that every child should have an opportunity of learning to draw; the theory being that if equal facilities were extended to all children alike there would be some who would make the most of the opportunity thus afforded, and who would develop more than ordinary power. The proof of the success of the experiment was seen in the International Exhibition of 1867, when, as I before said, the whole aspect of this question of Industrial Art was entirely changed and elevated. Our situation in America is at present somewhat similar to that which I have attempted to describe in England. We are beginning to take up this question of Industrial Art in a serious way; and with the experience of other countries before us, regarding experiments in which they succeeded as well as those in which they failed, there can be no particular reason why we should, like them, throw away fifteen or twenty years of time in mere experimenting, unless our circumstances are totally different from theirs; and I claim that this is not the case. This leads me to say that the theories which have been propounded in some quarters on this subject, would lead us directly into that wilderness of delusion in which some of the European countries wasted much valuable time before they hit upon the right way. Of these theories, one is that instead of teaching the whole mass of our public school children to draw—which is claimed to be impossible—we should go around among the schools and pick out the talented children and put these in special schools; that we should pick out those who at an early age display an ability to

sketch, and give them a good education in drawing, and let all the rest go. That is precisely what was done in England, and is precisely what proved to be a failure, and had to be given up. It seems to me it would be equivalent to establishing colleges for a few picked pupils, instead of making a constituency for those institutions by establishing a sound general education.

Then there is another consideration, and that is, who is to decide in advance as to the qualifications of a pupil? What educator, what parent, what philosopher can enter a public school and pick out those children who, after the lapse of ten or fifteen years, are to succeed in any branch of education? Furthermore, supposing they had the power to do this, conceding to them an infallibility equal to any that is claimed by the Pope, and allowing them to pick out every boy in a school who is going to become a great mathematician or scholar—to pick him out and send him to a college, leaving all the rest uneducated—then I ask, upon exactly what moral principle do you refuse to teach a boy who is not going to prove very highly successful? The talented boys being taken out of the class, whatever class it may be, you have in the boys who are left just those who ought to have the greatest pains taken with their education. This is a plan of arbitrary solution and it will not work. You cannot pick out any successful man in his teens except by accident. Self-culture is a gradual process, and some people very much improve as they grow older. Some of our greatest men have had a reputation for being thick-headed as children; and indeed thick-headedness in children may be regarded as a very great blessing, in so far as it is a means of protecting them from over-education when young. It is a mantle of protection which nature spreads over the people who are to become great, to guard them against and shield them from the hot-house forcing of powers not ripe for development. To condemn a child because it displayed no particular ability at a very early age would be unphilosophical, as well as cruel. Before education of children in drawing in the common schools has been secured, it would be a throwing away of money to attempt to remedy this evil of a want of taste simply by the establishment of art schools—which is no remedy. It failed in England, and will fail here. One art school for the development of talent in this city, in so far as it would remedy a want of taste or skill in the manufactures of

the whole country, would be like one drop of water thrown into the Delaware, or one bucket of water turned into the Atlantic Ocean. Instead of establishing art schools, the true remedy is to teach the people. When you have done this, the people will in due time establish those art schools and every other educational agency that may be needed. In proof of this, I refer to the experience in England, where, after fifteen years of government support, with this incubus of a want of good design hanging over the English people, there were only nineteen schools of design established in the whole country; while between 1851 and 1875, a little longer period, one hundred and twenty schools of art were established, and about eight hundred night classes similar to those we have established in New England. All these came from the demand, and the demand came from the instruction of children in public schools.

I think then it is generally acknowledged that in order to build up a public system of education, we are required to treat all alike, that any expenditure of the public money contributed by all the people should be for the education of all the people, and not for that of merely a few. My theory, deduced from actual observation as a teacher, is that out of the many come the few. I hold that we have no right in the public schools to teach specialties for the benefit of two or three individuals: what we have to do is to give all an education, so that all shall possess primarily the power of developing their best faculties in after life. The boy having a scientific turn of mind who aspires to be an engineer or inventor, the future artist whose taste lies in paintings or architecture, and the youth of all other professions that would be represented in the community, would be none the worse for a knowledge of drawing.

I say that the similarity between the condition of this subject in this country and that which existed in England, makes it manifest that in order to secure a perfect remedy for the evil complained of, we must follow somewhat the course there pursued, adapted to our own circumstances. We must catch the artist or designer in his youth, and proceed upon the principle that "as the twig is bent, the tree 's inclined." After five years of age, every day of a child's life that you leave uncultivated, makes it a

much harder task for a teacher to teach him, and much more difficult for him to learn.

In carrying out this reform in the public schools in England, there were many difficulties to be encountered. There was a general disbelief on the part of the public that every child could be taught to draw. It was usually considered there, and I believe it is to a great extent so considered here, that to succeed in drawing required a special endowment, a special gift. When a man who never tried to draw in his life, sits down and attempts to make a portrait or a sketch of some landscape, and finds that he cannot do it, he at once complains that he has no gift for drawing. Now if we apply that to reading, or any other ordinary accomplishment, what is the result? Let a man attempt to read who never saw the alphabet, and he will find it rather a hard task; but when you hear him say, as the reason why he gives up the effort, that he has "no gift" for reading, you will be apt to consider the remark as rather stupid.

The cause of drawing in the public schools was materially advanced by an experiment tried by a body of very practical people in England. I have not had the pleasure of an intimate acquaintance in this country with any one member of that body, called there and here the Society of Friends, or the Quakers; but in my work in England I was intimately associated with them for a considerable time, and came to know a great deal about them, and also to help them in this experiment. I dare say the race is not very different here, and that a fair description of an English Quaker would hit some prominent peculiarity of the Friends in this city. I think you will bear me witness when I say that a Friend, as a rule, objects to music, both instrumental and vocal; considers the one a waste of time, and the other a jingling of discordant elements; that he regards dancing and various other kinds of enjoyment as coming under the head of frivolous amusements, and never indulges in them nor will allow any of his sons or daughters to do so; and that he considers life a matter of so much importance that there is little enough time for the important duties, without wasting a great part of it on unimportant ones; and yet, as a matter of fact, the Society of Friends in England was the first public body that adopted Drawing as a subject to be taught to every child. A sternly practical body, the

educationists of that creed determined—and it was the first body that so determined—that whatever else children should learn, they must at least be taught to draw. Now that experiment solved two questions. It demonstrated that it was possible to teach all children, for it was found that exactly one hundred per cent. did learn to draw, and learned well; and it also demonstrated to the minds of a large number of people that, instead of being simply a source of amusement or a mere accomplishment, Drawing had been elevated to the position of one of the solid subjects of study, and one which ought to take its place among the practical utilizers of life. The defects of the system of special instruction for the benefit of a few soon made itself apparent. In the schools where only a few were taught, the most proficient of the pupils were selected to attend the public examinations that were held all over the country. A girl who displayed great beauty of sentiment in color, or a boy who had some skill in drawing animals or ships—in a word, the picked talents or geniuses, “the flower of the flock”—were sent into these public examinations, and against them were pitted these young Quaker pupils. Now what was found? It was found that one hundred per cent. of those who were taught as a part of their elementary education the subject of drawing, not as a specialty, but as one of the regular branches of study, did infinitely better than the picked geniuses, and their attainments in even the higher branches were much more satisfactory. On the other hand, the so-called talented scholars, those who had made a specialty of this subject, fell behind, and as a class passed the examination with indifferent success.

That was about the year 1851, and the general trial of the whole subject soon after followed. The school-masters of London were then asked to try the experiment of teaching the art to all the children of the public schools, and the only way by which this was accomplished was by their undertaking to give up one-half of the time spent in writing to this new subject of drawing. After a trial of one year, at a meeting which was held, these school-masters was asked to state their conclusions as to whether it was possible to teach all children, and their verdict was a unanimous one—that in giving to Drawing one-half of the time that would otherwise have been occupied in writing, the children wrote bet-

ter and the Drawing was a clear gain. The time occupied by it, something like one hour or one hour and a half per week, was a source of great comfort to the children, and drawing was an exercise which they enjoyed more fully than they enjoyed anything else. Now I might claim to be something of an authority on that point, because for a number of years I have been looking with a scrutinizing eye for some individual unable to learn to draw and, with the exception of persons afflicted in such a way as to be incapable of doing many other things, I have found none—not one. The only form of incapacity for learning to draw; which I recognize, is either that physical incapacity produced by blindness or paralysis, or that mental incapacity arising from idiocy or lunacy.

Now we meet with a great deal of nonsensical talk in regard to this subject of drawing. Not only is it assumed that there is a mystery about the subject, but the claim is made that some one man who is highly successful in the pursuit of art, is specially gifted and has a genius for it. One man, for instance, rises in public estimation as a physician and becomes very distinguished, whereupon the people call him "a genius." But what is the secret of his "genius?" I have examined somewhat into the lives of many great men, and have had the good fortune to have been acquainted with some; and having a little curiosity, I have tried to discover what this secret is. So far I have discovered, all men who have arrived at greatness in any of the walks of life have been distinguished for one common peculiarity; and that is, they always worked about twice as hard as other men. It is popularly supposed that this secret of genius is something that we cannot comprehend. My own belief is that like the secret of some societies, it is one that will always be kept, because there is nothing to divulge!

I am pretty sure that so long as we are left unprovided with wings, the only way for us to reach the top of any ladder will be up the steps; and the only safe way is to get up one step at a time. If, in looking at some individual on the top of the ladder of fame, and wondering how he got there, you are told that that distinguished man was born there, or came down in a balloon from the skies, you will, I think, be justified in disbelieving the story, and accepting, in its stead, something which is a little more compati-

ble with the laws of physical force. Now, for twenty years I have been looking among my various pupils—and these have averaged from three to six thousand every year—for that individual, who, giving himself a fair chance, tried to draw and was unable to learn; and up to this time I have failed to find him. I think, therefore, I am justified in my belief that he does not exist. True, there are people who find it difficult to go on, who get discouraged and abandon their purpose at the first reverse; and I have discovered this—that if there is one certain sign of future success, it is that of having less confidence in your own ability and your own gifts than in your determination to go on. Those who succeed the best ultimately, are not those who show the greatest amount of talent in the beginning. Were I required to pick out of a class of scholars the one whom I regarded as most likely to prove ultimately successful, I should perhaps pick out one stupid and thick-headed—so thick-headed as not to know that he was stupid—but who would go right on; and as specimens of the class who invariably fail, I should pick out those who are on excellent terms with themselves, who do everything in an easy, sketchy, pretty way, and who would go on repeating it until they died, without making any improvement, simply because they are destitute of this determination to conquer, and are filled with a self-satisfaction resulting from over-confidence in their own powers.

Now let me call your attention to what we have tried to do in the city of Boston, and State of Massachusetts, in order to give this subject of Industrial Education a fair test in this country. In the year 1870, an act was passed by the legislature, requiring that every child should be taught the art of drawing, and in addition to that, that in every city having ten thousand inhabitants, or a greater number, night classes for Industrial Drawing should be established—requiring every city to establish what might be called an Industrial Art School, in which Industrial Art and mechanical drawing should be taught. This at once created a great demand for instructors, and our great difficulty has been to find competent and experienced persons for such positions. The difficulty has been to secure teachers competent to show, by their own skill in the art, what is meant by Industrial Drawing. The term itself had been especially chosen in order to overcome a great difficulty.

The parents of the scholars had been very generally impressed with the belief that the kind of drawing which had been taught was of a non-instructive character—that drawing had been rather a means of occupation for leisure hours, and had no distinct bearing upon anything that was of practical use to the pupil. In the law that was passed, the particular kind of drawing that was provided for was described as being Industrial, and that was the important feature—that the drawing should have a distinct relationship to the industry of the people; in other words, that it should be made of general utility and assistance in the daily avocations of the people. In pursuing our inquiries as to the means by which the art could be most effectively taught, the fact became apparent to those of us by whom it had not already been fully recognized, that this Industrial Drawing had laid the foundation of all success in industrial manufactures; and, therefore, in beginning to teach Industrial Drawing, we were obliged to include Geometrical Drawing, necessitating the use of compasses and a ruler.

Inasmuch as the scheme of instruction required that every pupil in the public schools should be taught, it followed necessarily that the regular teachers were obliged to do the teaching. It would have been impossible to find in the city of Boston alone a sufficient number of special teachers for all the pupils in the schools. It was therefore a necessary condition of success that every teacher in the public schools should be able to teach elementary drawing. It was also necessary that the subject should be graded, and it was accordingly graded from the first steps to the highest; and I regret that in this hall I have not an opportunity of showing you exactly how this was done. I could show you how, from the first stroke upon the slate up to a design for a manufactured article, that the progress is gradual; and that if you begin at the beginning and progress step by step, as the child does in the school, you would find that there is no point in the whole course where the study of drawing becomes difficult. In the primary schools, the child is taught the use of certain expressions, and the reason for this is that one-half of the work of drawing depends upon the child understanding the terms used by the teacher, and having his attention drawn to the nice distinctions which exist between one form and another; and therefore the geometrical forms are

given like the alphabet, and are drawn in a way to show a certain amount of intelligence. To some of you it may seem cruel that before nine years of age a child should be required to make designs, but you would not think so if you saw him going through that particular lesson. Indeed I do not know of a prettier sight than that of a primary class—children of from seven to nine years of age—filling their slates with what they call “original designs.” The teacher simply gives a square, circle, or triangle, to the children to draw, and then each pupil in the school is expected to fill that geometric form in some way that would make it attractive.

In addition to that, these little children are given lessons in drawing from dictation, without having ever seen the object which they are called upon to draw from the oral description of the teacher. In the grammar school, instead of drawing from copies on the blackboard, the children are taught to draw from the real objects. Instead of making very simple designs from dots or thick and thin lines, they make what are called elementary designs to fill given spaces from given subjects. In other words, a square, or any geometric enclosing form, being given, as well as a subject or unit of form, they are taught to fill that geometric form, to transpose a previous arrangement of the pattern, and so on. They draw from solid objects, in order that they may see what is meant by drawing from nature, the best preparation for that exercise being the drawing from geometric solids. The geometrical drawing exercises are made use of in order to insure accuracy of perception; and this leads me to remark that one great advantage resulting from a knowledge of drawing as taught in the public schools, is that it teaches the children to see. You may think that if you have eye-sight you are able to see, but that does not follow: you may be able to look, but it does not follow that you can see. You may have a picture on your eye, but it does not follow that you have it truly in your brain. This exercise of drawing, therefore, is going to have a more important influence upon every other branch of education than that which it has upon drawing itself, because it will educate the eyes of the children. There is one thing which I am more and more convinced of every day of my life, which is, that men or women who have not been taught to draw ought not to be believed on their oaths as to anything which they have seen with their eyes. They are unable

to tell you definitely what it is they do see. When you ask them to show you in some tangible form what it was that they saw, and they show you something utterly distorted and unlike the original, you are entitled to judge them by their own evidence of what they see, which is a distortion. The eyes of people educated in art see objects in a totally different way from that in which they are seen by others and the impressions which are received concerning the same object are in the two cases widely divergent. In the High Schools, this elementary work is carried on still further. Instead of drawing from models, as in the grammar schools, the pupils who are advanced enough, paint from nature, and practice shading from nature. Instead of learning geometrical drawing, they are to learn perspective, and instead of filling up certain outlines with various forms, under the head of elementary design, they study applied design, or design applied to industrial purposes.

By way of summarizing the courses of study which I have endeavored to describe, I will now repeat to you that, in the Primary schools, these pupils have exercises from the black-board, definitions of geometrical forms, design, dictation and memory-drawing. In the grammar schools, there are exercises in elementary design, drawing from models, geometrical drawing, with occasional exercises in dictation and memory-drawing. In the High schools, there are exercises in painting and shading from nature, in perspective and in Applied Design. We are preparing also for the study of Historic styles of ornament, and the botanical analysis of plants and flowers. Every pupil in the High school advanced classes is required to make at least two designs for some useful purpose, in the course of one year.

In addition to this course for the public dayschools, there are the evening schools—these having been established more particularly as a means of capturing and helping that portion of the generation which has just escaped from school, consisting mainly of a large mass of young mechanics. From these schools, however, I expect less good to arise for the present, than from the day schools, because the students have not as a rule been taught to draw when young; and my reason for this opinion is, that it is difficult and almost impossible for the pupils of these schools to give enough of time or to stay long enough to enable them to succeed: more-

over, a child will learn more rapidly at nine than at nineteen years of age. The subjects taught here are Free-hand Drawing from the flat and the round, Mechanical Drawing, Architecture and Building Construction, Applied Design, and Ship Draughting.

We have also a Normal Art School, which has been in existence for a little more than a year. The causes which led to the establishment of this school, were that when the act of the Massachusetts legislature was passed, the great difficulty in complying with it was the impossibility of finding good teachers. A painter, a sculptor, an architect, an engineer, is not necessarily a teacher; a teacher is one who understands the elements of all these branches thoroughly, and who has the experienced power of making a pupil learn from his instruction. For a mixed class of twenty or thirty, it is essential that the teacher should be one who is familiar with all of these branches; otherwise you will not have a teacher who is competent to teach every pupil in the class. The only cure for the difficulty of producing good teachers was the establishment of a normal school, in which the teachers should be required to go through a thorough course of training, which course should include the scientific branches as well as the artistic. The course of study is arranged to cover four years; and is being carried out, as well as the time has permitted.

The point to which I would now call your attention is, the value of Industrial Art Education. I have already endeavored to show that it would have a value *educationally*, and now we come to consider what is its value *commercially*. There are many in this hall to-night who can contradict me if I overstate the fact, when I say that you cannot put into the hands of the working man, who has been taught their use, two more valuable instruments than a pencil and a pair of compasses. They will prove not only of value in their use to him, but of value to society. In all industrial occupations in which it is employed, the skillful handling of the pencil is of so much importance in determining the value of an article, that where such skill does not exist on the part of the working man, there is a serious loss—a loss to the manufacturer, a loss to the workman, and a loss to the purchaser. At Worcester, Massachusetts, where there a number of machine-shops, and many mechanical trades carried on, the manufacturers say that a workman who is able to draw is worth to them thirty-three

per cent. more than one who is unable to draw. They are prepared to pay higher wages to a man who can draw well than they would be willing to pay to one who cannot draw. The reason for this is that the skilled workman loses no time, does not need to have some one over him to show him, and puts into his work an accuracy and finish which could be acquired only from an intelligent use of his instruments, only to be acquired by delicacy in drawing. In looking at a manufactured article, your attention is directed first to the quality of the material, and then to the character of the manufacture; but not one of us ever bought an article without considering the question of taste, nor perhaps ever will. What is it that oftentimes makes one manufacturer successful and ruins another, but the presence or lack of taste in their goods? Whether the manufactured article shall be ugly or pretty depends upon skill in design; skill in design depends upon skill in drawing, while skill in drawing depends upon art education.

A few days ago I saw in the Art Museum of Boston a Persian rug which had been purchased for and was displayed in the museum as a sample of good taste. Its size was about six feet by four, and the price paid for it was \$400. That was not only its price, but its value—there is sometimes a distinction—and not only was it of that value, but it had been sold for a much larger sum in England, before it came here, and would sell for as much more if it went there again. I reflected that here was a rug which had been made by a people whom we are accustomed to regard as little better than half-dressed savages. As compared with the Persians, we should consider ourselves an aristocracy; and yet these so-called half-naked savages made a rug worth \$400.

Now I reflected upon the extent of our own capacity in the same direction, and what would be the value of the same kind of a rug made by ourselves. I accordingly went to the nearest store and examined a variety of rugs, and was informed that the prices ranged according to size and quality of design, from twenty and thirty to fifty dollars. They contained all colors and made an ambitious display, and I found any one of them just as good for all practical purposes as this \$400 rug of the Persians. The only difference was that in the one case the rug had been made with some little taste in design and color, and in the other case there was little or no taste. In the city of Lowell I was told by a manu-

facturer that they paid something like \$60,000 per year for their designs, which they principally import from abroad; and yet they are now discussing the question whether they should allow drawing to be taught in the public schools. I suggest that if other countries, when discussing that question, had decided against it, Lowell would have no need to discuss the question, because it would not have been in existence, inasmuch as its designs come from countries where drawing is taught in the public schools; and further, that if every designer imported from abroad was removed from the Lowell mills on the following day, the Lowell mills would have to shut up, and then the people would have plenty of time to discuss whether they would have drawing taught in the public schools.

The condition of France to-day is another illustration. Here is a nation that had been, one might almost say, despoiled and driven to the earth by her misfortunes, and yet to-day she is just as elastic as she was before her great war. This is simply because by her art education she has made the whole human race her subjects, and holds to-day in her hands the talisman which attracts you and me and all of us to Paris. We are simply slaves to her superiority. Political emancipation in one form took place in America one hundred years ago. Suppose we now try to emancipate ourselves from another kind of bondage to foreigners, and begin the second century of our national existence by resolving to develop what we know to be in us, and thus make ourselves industrially, as well as politically, an independent nation.

If I may be permitted to say a word to you as citizens of Philadelphia, it is this. You have here a great manufacturing city. I need no further assurance than what I have seen to-day to convince me that Philadelphia is destined to become one of the leading industrial cities of the world. I have endeavored to show you what England is doing for her manufacturing interests—interests precisely like those you have here. If we were to look to Germany and France, we should see similar efforts in behalf of art education going forward there. Now, how are you preparing to meet the competition in industrial products arising from this European education? You know better than I. But I can say that unless you are prepared to give equally thorough art education here, you

must expect only defeat, even in your own markets, when you come in competition with your foreign competitors.

Mr. Smith closed his remarks by an allusion to the Centennial Exhibition, and commending the idea of a Memorial Hall, which it is intended to found in connection with the exhibition. He showed from his own experience in connection with similar institutions, how easy it was to fill such a Museum with objects of art character and interest, when once they were founded on a broad basis; and he offered the very practical suggestion, which seemed to meet the favor of his audience, that the people of Philadelphia should see that the Hall or Museum received liberal contributions from the industrial master-pieces sent to the Exhibition itself. He believed that, at no great cost, the most important works from the foreign exhibitors could be retained to permanently enrich its collection.

FOURTH OF JULY.

SOME one has said the Americans do not know how to enjoy a public holiday, or, as it might more correctly be phrased, to enjoy publicly a holiday.

There is in this country really but one festival day which the nation, as a nation, celebrates. Christmas, New Year's Day, Thanksgiving Day, are, more or less, in different sections, seasons of general rejoicing, but general only in the sense of simultaneous, for they are devoted to family, or at most, to social gatherings.

Washington's birth-day is signalized by military parades in our large cities and towns, but not much attention is elsewhere paid to it, we suspect, and it is honored rather by deputy, as it were.

The fourth of July is our only national holiday. But as each anniversary of it goes by, it is to be feared that a conviction of the truth of the observation above quoted is more and more deeply borne in on the minds of all thinking men.

The causes are, perhaps, not so easily discernible; but the fact is undeniable, that the Fourth of July, as at present constituted, is an unmitigated and outrageous humbug.

Another is close at hand; soon our ears will tingle with its noisy rites, and the smell of its burnt-offerings will salute our nostrils. Let us review the record of one, or rather all Fourths of July. Let us place ourselves in the situation of some benighted foreigner, just arrived in this land of freedom: we can thus, perhaps, realize the impression produced by a Fourth of July on those who see it for the first time; to us, indeed, custom hath staled its infinite variety. For some days before there are symptoms of the great event; the noise of the cracker is heard, and the boys go about the streets with unusual vivacity. These things our foreign friend has perhaps noticed; but not knowing what they portend, he goes to bed on the night of the 3d of July, perchance to sleep, which if he succeeds in doing in spite of the firing of guns, etc., before sunrise, he will be awakened at that hour by such an uproar of cannon and bells, that he will at first imagine that a new revolution has broken out. On second thought, he will recall the intimations he has received as to the "day we celebrate," and feel convinced that it is, indeed, an important occasion. After breakfast he goes into the streets, to run the gauntlet of troops of imps revelling in fire, and devils of a larger growth unexpectedly discharging fire-arms near by him. At noon more salvos of cannon and bells "*ad libitum*," on the cessation of which the lesser noise-makers redouble their efforts, with a partial intermission after dark in case of fireworks, and continuing till late at night. The fireworks are a welcome relief; they make little noise themselves, and they put some stop to other noises. Our foreign visitor will at least be grateful to them if he does enjoy them, and though he may not understand the curious eagles and other devices, he cannot fail to admire the rockets mounting gracefully into air, leaving behind a gently-waving trail of fire, and at the summit of their career bursting into a shower of gold.

The fireworks over, the farewells to the great occasion are pronounced by all sorts of explosives, and our foreign friend seeks his domicil convinced that the Americans are a singular people. The next morning he will find new matter for astonishment in such paragraphs as this in the *New York Tribune* of July 5, 1874: "One riot, six brutal affrays, thirty-five fires, forty children seriously wounded, at least three persons killed outright, and one child burned to death, form the total of the casualties consequent

on the celebration of the Fourth in this city and Brooklyn." This may seem appalling to him, though he will not wonder at the number of fires, even if they are like that in Allegheny city, in which place there were sacrificed on the altar of patriotism a hundred or so houses, offered up, no doubt, by the small boys, in the same cheerful spirit with which Artemus Ward sent his first cousin and his wife's brother to the war. For ourselves, we confess that, as year after year we read the long lists of those who have shot, burnt, blown up and otherwise mutilated themselves in displaying their patriotism, we feel a vindictive delight at seeing them thus hoisted with their own petard. It is gratifying to think that retributive justice has overtaken some of those who have purchased their miserable gratification at the expense of the comfort of their quiet fellow-citizens. Those of the victims of the day who, on the other hand, have suffered from ills not of their own devising, have our sincerest commiseration.

In the manner in which we display our joy on this our great national festival, there is nothing of the originality on which, as Americans, we are wont to pride ourselves. There are a number of nations less civilized than ourselves, who adopt very similar methods. From the Chinese we have obtained one of our most important means of properly honoring the day, namely, fire-crackers. The noble savages who inhabit various portions of Africa, travelers tell us, signalize all occasions of public ceremony or rejoicing by firing guns, beating drums and tom-toms, and blowing horns, with an accompaniment of howls and yells, all of which is regarded as in the highest degree suitable.

As a nation advances in the scale of civilization and intelligence, so do its manners and customs become more refined and intellectual. In childhood we know not how to express our emotions otherwise than by giving them free vent as nature dictates; the child shouts and laughs with joy; man, civilized man, smiles. The savage man is like a child, and savage nations manifest their feelings as children do.

But nations, like children, ought to grow up and "put away childish things." When, then, a nation displays characteristics belonging to those far below it in the scale of civilization, we are forced to conclude that in this respect it is unworthy of the rank to which it lays claim, and which is commonly assigned it. Here,

now, is a pleasant reflection for an American: our great, progressive, enlightened republic, which we say is among the foremost nations of the earth, adhering to customs like those of the semi-civilized nations of the East, or, far worse, of wretched savages, whose ferocious and degraded barbarism is almost unparalleled.

Mortifying as this may be to our national pride, it is impossible to deny the fact. The scenes of which we have spoken would not be out of place in a description of the manners and customs of the Chinese, or the inhabitants of Dahomey.

The intelligent portion of the community in our large cities show their appreciation of what is done by going out of town, those of them who can, and staying until the dreaded day is over. Year by year the exodus increases, till the better portions of the city look deserted.

Shades of the Declaration's Signers, are we come to this? Are your deeds thus commemorated, and do you not rise from your graves in indignant protest against such a degradation? As a people we are called on to mend our ways in this respect, and to put an end to the puerile folly of an exhibition compared with which an Indian war-dance is a solemn and majestic spectacle.

We glory in the inventive genius of our nation: can it produce nothing better than this? We have even lost whatever art of festal celebration our ancestors had, for surely "Merrie England" never beheld such a saturnalia of fools as each successive year witnesses in this country.

There are those among us who have studied history and traveled in other lands—who are conversant with the institutions and customs of many peoples, ancient and modern: can they not tell us how these did, or do, celebrate their great national days? Can they not describe magnificent processions, splendid games, contests of strength and skill, frolicsome carnivals, joyous festivals, imposing military displays, that we may imitate if we cannot invent? Some of these things, military parades for instance, we do understand, though too many of our processions are composed of an array of individuals attired in the national costume of black, including hat and white cotton gloves, presenting an appearance eminently respectable, but not calculated to fire the spectator with enthusiasm.

Let us make an effort: even a base ball match would be a step

upward; something, at all events, can and should be done to rescue the celebration of our national day from the management, so far as there is any, of fools and children, and substitute for their proceedings something which, as men of common sense, we can approve; and as Americans, need not blush to witness.

DR. VAN DE WARKER ON "THE RELATIONS OF
WOMEN TO THE PROFESSIONS AND SKILLED
LABOR."¹

PARTISANSHIP is misplaced in scientific discussions. Truth lies in both the *yea* and the *nay* of most questions, and is not to be advanced by the neglect of either. Most writers on the above and kindred subjects, indulge in a strong statement of facts and arguments which bear on one or other side of the questions treated, while their converse is overlooked or ignored.

Dr. Van de Warker has undoubtedly fallen into this grave error in the article under consideration; and instead of treating of the relations of women to the professions and skilled labor, has really discussed only their *disabilities* in these relations, failing to recognize their natural abilities as well. He has made a more serious mistake than this even, viz: an unfair putting of the side presented. He states, at the outset, his purpose of studying woman from the stand-point of the gynæcologist; claiming the right to be heard on this vital question, on the ground of having devoted years to the study of women and their *diseases*.

This alone is enough to vitiate all his arguments and conclusions, as bearing on the questions which he professes to discuss. Pathology constitutes a special science, and cannot fairly be made the groundwork of general considerations; and it is unfortunate that the most prominent writers on these subjects have been physicians who have apparently not known how to distinguish between physiology and pathology. This may be explained by the fact that their relations are mainly with the sick; their observations are made among them, and their conclusions are naturally influenced

¹Popular Science Monthly: Feb. 1875.

by these personal experiences. No argument is needed to prove that this is not the point of view from which the questions embodied in Dr. Van de Warker's subject should be examined. Had his paper been entitled :—"The disabilities of invalid and semi-invalid women in relation to the professions and skilled labor," he would have had a better claim to fairness in the treatment of his subject.

As these objections cannot, however, be brought against the entire article, and as it may be considered fairly to represent the views of a majority of those physicians who have lately addressed the public on these subjects, its statements and conclusions will be considered *seriatim*.

The first points taken, as stated in a recapitulation, are that the moral subjection of woman to man, is a sexual peculiarity, perpetuated and intensified by heredity, (rather than the *law* of heredity, as the writer puts it,) and that the tendency of civilization to antagonize this subjection, is neutralized by sexual selection.

That there is a partial truth in these statements will not be denied; but since this subjection has its foundation in the lower traits of character, and, as recognized by Dr. Van de Warker, is held in common with the lower animals, it must have been modified by civilization, which consists in a differentiation of the human from the lower animal races. That which is entirely neutralized does not manifest itself; and the statement of a tendency of civilization is really the statement of a partially accomplished *result* of civilization.

It may be of interest to note that the subjection of man to woman, (also a sexual peculiarity,) though manifested in a different direction, is perhaps equally influential upon the character. The continued modification of this mutual subjection will inevitably accompany the continued elevation of the race, through an increasing ascendancy of the higher intellectual and moral, over the lower traits of character.

The probability of the failure of inheritance from intellectually active women is next considered.

This is undoubtedly a serious difficulty, but it is one which belongs to an entire class of social problems. It is a recognized fact that civilization itself tends to infertility. Of the relative fertility

of man as compared with the lower animals, Herbert Spencer speaks as follows: "His extremely low rate of multiplication we shall recognize as the necessary concomitant of his much higher evolution;" and of the relation of fertility to future progress, he says: "Man's further evolution itself necessitates a decline in his fertility."²

It is well known that the superior classes are less fertile than the inferior; their infertility probably depending not so much upon physiological differences, as upon later marriages and greater prudence in undertaking the responsibility of offspring. Granting that marriage occurs "in obedience to a sexual law and not from choice," there is no doubt that sexual and emotional impulses to marriage are held in abeyance by motives of a higher type naturally operative in more highly cultivated characters. While ignorant improvidence drifts into marriage regardless of its responsibilities, the higher standard of comfort at which educated persons will consent to have families, makes diminution in fertility among such a necessity; but this would scarcely be urged as an objection to education in general; and although "it is a matter of common remark how frequently men of unusual mental activity leave no offspring,"³ we should hardly be justified in drawing an argument from this fact against the higher education of men!

Since a decrease in fertility is then a necessity of civilization, and may indeed be regarded as one of the evidences of it, it is puerile to lament it, or to raise it as an objection to what would otherwise be considered an advantage, viz: the intellectual elevation of women.

Of the effects of diminished fertility upon individuals, Spencer says: "We must conceive the type gradually so modified that the more developed nervous system irresistibly draws off for its normal and unforced activities, a larger proportion of the common stock of nutrition; and while so increasing the *intensity, completeness, and length of the individual life*, necessarily diminishing the reserve applicable to the setting up of new lives, no longer required to be so numerous."

That the principle of the survival of the fittest will eventually

²Principles of Biology, Vol. II: § 365, 374.

³Principles of Biology, Vol. II: § 367.

secure inheritance through such individuals is undoubted. "In this case, as in many others, nature secures each step in advance by a succession of trials; which are perpetually repeated, and can not fail to be repeated until success is achieved."

In all densely populated countries the choice lies between small families and a diminished number of marriages. That the former alternative would tend to the more rapid improvement of the race is evident. The too early and frequent bearing of young is as injurious to women as to the lower animals—tending to an arrest of development, impairment of constitution and premature decay, with their accompanying moral deterioration. The young are also of a less active and hardy constitution. Statistics show that, other things being equal, infants born of mothers from 25 to 30 years of age, are larger and more likely to come to maturity than those of either younger or older women.

It is then absurd to lament the voluntary postponement of marriage for the sake of a professional education, when the best interests of society demand, and economical conditions continually enforce such postponement. It will be granted that the physical and moral health of women suffer when this period is passed in comparative idleness, or in dissipations and follies but little better than actual idleness, or even in work that occupies the hands without filling and sufficiently taxing the mind. Hence, preparation, during these years, for business or a profession, must be conservative both of individual interests and of the general welfare.

It may be objected that women would have little inducement to prepare for business or a profession, with the prospect of marriage at twenty-five, and the disabilities which marriage brings, since they are undoubtedly "an obstacle to professional success," as forcibly stated by Dr. Van de Warker.

Since there is a degree of importance to be attached even to exceptional cases, the experience of Mrs. Lucretia Mott may, with propriety, be cited in this connection. She asserts that the period of child-bearing was, with her, the most active of her whole life and most productive of work.

If Spencer is right in the conclusion that decrease in fertility, as an attendant of progress, will go on "until the rate of multiplication is just equal to the rate of mortality," (and the pressure of population must finally bring about this result,) child-bearing

will become gradually less burdensome, until the limit of progress in this direction shall be reached. Spencer says that "some average number [of children] between two and three may be inferred as the limit." A gradual reduction in infantile mortality, which is much increased by rapid and excessive child-bearing, will accompany this diminution in fertility; each process sustaining and providing for the other by a mutual reaction.

Evolution is thus seen to provide for the intellectual elevation of woman, by a constantly decreasing demand upon her for the performance of those functions which are purely physical. When an average production of two or three children only shall be required, this will present a comparatively slight barrier to intellectual development, or to the work which both contributes to it and grows out of it.

It would then seem that the impulse, on the part of women, to modify sexual differences, springs from profound changes slowly but surely operating in social economy, rather than from restless ambitions; and that this impulse, being involved as a factor of the future progress of the race, is in entire harmony with the principles of evolution which prevail in Sociology, no less than in all other departments of Nature and life.

The statement that "women are retarded in their advancement to professional work by public opinion," requires no special notice; public opinion being only an index of the stage of progress and a recognition of existing conditions. Time was, and still is in some countries, when public opinion opposed the idea that one could be a gentleman and, at the same time, a useful member of society. That "a vast majority of women are opposed to their own sex entering the professions," is a natural accompaniment of the imperfect education and intellectual development of the mass of women. It is a common-place of political science that ignorance is conservative; not in the truer, higher sense of the word, but as opposed to progress. The leaders in all onward movements have been from among those in the advance lines of thought, and they have ever had to contend against "a vast majority." History repeats itself.

"One would naturally suppose," says Dr. Van de Warker, "that in the matter of religion a woman's opinion is as good as a man's; that with equal learning and experience, a woman is as competent

to discharge pastoral duties as a man, and yet you may count upon the fingers of one hand the number of pulpits filled successfully by women in this *great country*."

If by the "matter of religion" were meant the things which pertain to a spiritual life, and the charity which sees in every man a brother and in all humanity a common family, undoubtedly the fashion of the world would have little to do with it, and woman's deeper religious nature would ensure her the supremacy in this field; but on the point of "equal learning and experience," a question at once arises as to the opportunities afforded women of fitting themselves for the profession of Theology. How many theological schools of acknowledged reputation have made provision for the education of women?

"A vast majority of women" show good judgment in preferring an educated to an uneducated expounder of the theology, physics, metaphysics, and political economy, which constitute "the matter of religion," as referred to above.

It is true that "in this [great] country, women are free to enter the medical profession;" but it is also true that they are not free to enter one in a hundred of the medical colleges of the country. There may be a freedom so hedged about by conditions as to be practically null. The women of California are undoubtedly free to enter the medical profession, but they must come to Chicago, to Ann Arbor, to Philadelphia, or to New York, for the necessary education. In the mean time, the doors of her University stand invitingly open to such of her sons as may desire either to sip or to drink deeply of the advantages which it affords.

The writer apparently argues that because "women seem to lack confidence in their own sex in this position," (as physicians,) this lack of confidence must always prove a barrier to success. In reply, there is needed but the statement that the oldest medical school in the world for the education of women—the Woman's Medical College of Pennsylvania—has but just completed its first quarter-century, having observed its twenty-fifth anniversary on the 11th of March last by the opening of the first college building ever erected for the express purpose of the medical education of women. Confidence in times of physical suffering is of slow growth; and the mass of women would have shown themselves progressive indeed if twenty-five years of existence of the "med-

ical woman" had sufficed to put her on an equality, in public confidence, with the medical man, hoary with the accumulated experiences of centuries. "The reliance upon man in moments of bodily pain is" indeed "easily explained," but furnishes no argument against the ultimate success of women in this profession. Their average success at this early period in their history, is better than could have been predicted; and can be explained only on the ground of the "fitness of things."

"The anomaly of the female ovariologist," so far from waiting on the future, has already been produced in more than one instance, and the entire department of female surgery is successfully occupied by women.

It is a significant fact that the literature of medicine has embalmed the names of Mesdames Boivin and La Chapelle; giving a far greater ratio of distinguished women in proportion to the whole number ever engaged in the profession, than is shown by the long list of medical celebrities from Hippocrates down, as compared with the thousands upon thousands in the ranks of medical men.

In treating of the anatomical unfitness of women for skilled labor, and their consequent unconscious avoidance of such labor, the writer evidently loses sight of the laws of development, which teach that "anatomical unfitness" has resulted as much from the "avoidance," etc., as the avoidance from the unfitness; and that this condition will correct itself, in the natural course of adaptation of the organism to the environment. He recognizes these principles, however, in the following paragraphs:

"Woman must be content to grow up, to evolve, generation by generation, to a position from which she can compete with man in the fields of labor." "There exists in society a force which is tending to the parallel evolution of the sexes. This force lies in the large excess of females in the adult population of many countries. Stern necessity will force—if this condition of affairs continues in the future (we will pardon this confusion of moods and tenses, for the sake of the sound philosophy)—a large percentage of this excess to compete with man in the professions and skilled labor. Many of these trained women will marry and have children, and thus form nuclei, divergent lines from which will extend into posterity, ever adding increment upon increment to the forces

which tend to parallelism in the evolution of the sexes." These are legitimate deductions, if the idea of parallelism be restricted to that of an equality, *in value*, of intellectual, social and labor-producing development; and the point is thus well met. It must not be inferred, however, that future progress in this direction will necessarily be as slow as has been the development of the race in the past. Woman shares with man the cumulative benefits of civilization, and, in many respects, the two sexes start in life on an equal footing. The accumulated literature of the past belongs to both, and the increasing facilities for observation and experiment are alike ready to their hands. Much is hoarded, it is true, behind barred doors which refuse to open to woman; but progress in this direction is enough to afford encouragement to the prophetic mind, and difficulties to be overcome will exert their legitimate influence in developing the determination and energy so essential to success. It is also true that dwarfing influences begin their work upon the human female at an early age. The proprieties of girl-life, under a widely-differing law from those of boy-life, interfere with robust development; and a thousand forces are at work to strengthen the emotional nature without securing the intellectual growth necessary to a healthful balance. Our author supplies a quotation from Dr. Maudsley which is significant in this connection: "Through generations her character has been formed with that chief aim [marriage]; it has been made feeble by long habits of dependence; by the circumstances of her position the sexual life has been undesignedly developed at the expense of the intellectual." The mere statement of the causes of these conditions, suggests the remedy, viz: a change of "aim" and of "the circumstances of her position."

That such changes must come, as a result of the very continuance of the plan of educating women solely for marriage, is evident. While this method may have served the race well in the past, it is seen to be constantly defeating its object now, since it compels men to celibacy by rendering women unfit to assume their proper share of the family burdens, which are constantly increased by the increasing demands of modern civilization. Also, through the practical separation of their daily lives from those of men, women are losing much of their former healthful influence.

In weighing woman's chances of intellectual success, Dr. Van

de Warker says: "If we examine carefully the mental action of women, we perceive in it an undercurrent of sex." This he denominates "sexual cerebration," which, judging from the context, may be supposed to mean that on any given subject, a woman's thought is likely to differ, in some particulars, from a man's thought. While he sees in this fact a barrier to the professional success of women, another view is that in this very difference lies an important element of success.

There are wide fields where women will succeed, not in spite of being women, but because of it. There will doubtless be a differentiation of work in the professions, as in other departments of labor, in which "that exercise of the sympathies which gives such beauty to the character of women," will naturally assert its beneficent influence, and where the feminine phase of sexual cerebration (which our author assures us, "in no way interferes with high culture and the exercise of the best qualities of the mind") will give to professional work that element of tenderness and sympathy which is never out of place.

With regard to "the evils resulting from voluntary celibacy," it may be replied that if women marry "in obedience to a sexual law and not from choice," as previously stated, this matter will adjust itself in accordance with individual needs; such women as would suffer, either physically or mentally, from celibacy, not being likely to choose it from an ambition to succeed professionally.

While the possible evils of celibacy have received abundant notice from medical writers, the disastrous effects upon health, of marital excesses submitted to as a necessity by many married women, have been almost overlooked. Few physicians, however, need go beyond the boundaries of their own professional observations for evidence of their existence, and an impartial treatment of the subject of the comparative disadvantages of celibacy, requires their recognition. The injuries to the individual, resulting from excessive child-bearing, so common in married life, should also be considered in this connection.

Why apology should be deemed necessary for reference to a physiological fact, as in introducing the subject of ovulation, does not come within the scope of the scientific imagination. The

ground of science is hallowed ground, and the warrant of fact is always accepted by the scientific mind.

The mental disturbances likely to accompany ovulation and the meno-pause (change of life), are admitted to be far greater in those women in whom emotional development predominates over intellectual, than when the reverse is the case. Hence a *trained ascendancy of the intellect* cannot be supposed to increase their liability, but rather to lessen it. Every case of hysteria is a living argument in favor of such training. While women are undeniably liable to emotional perturbations, this is not peculiar to their sex, and there is no evidence that their judgment upon an intellectual question is likely to be impaired by any excitement naturally belonging to the periods referred to. To women in health, these objections do not, then, apply; and such as have not health are as likely to find it in study and in work, as in the office of the gynæcologist—though medical ministrations are by no means to be undervalued; certainly, a professed gynæcologist should take into account the influence that must result from the great modern improvements in the arts both of obstetrics and gynæcology, in the saving of life, health and strength to women, and the consequent increase of their efficiency and usefulness.

Upon the statement "that children are necessary to the mental and physical health of women, but that maternity is unfavorable to success in skilled labor or the professions," little need be added to the general considerations brought out in connection with the subject of infertility. It would be philosophical to suppose that the natural satisfaction of the instincts both of paternity and of maternity may conduce to the development of a well-rounded nature and character; but to assume that the non-fulfilment of either must vitiate intellectual work is unwarrantable, and in direct contradiction not only of the "matter of common remark" previously quoted, but of the main drift of the argument against intellectual activity in women.

The remaining points, as summed up in a recapitulation, have been discussed in connection with others, of which they are but repetitions.

Perhaps enough has already been said in regard to the groundwork of pathology on which the arguments and conclusions under consideration are mainly based; but it may be specified that

startling pictures of insane women, as on p. 468, are especially out of place in a discussion which claims to be "a physiological study."

A classification of the forces manifested in the human organism as "intellectual, physical and sexual," is certainly original; as an example of scientific accuracy, it recalls the ancient enumeration of chemical elements—"earth, water, air and fire."

There is evident, in the mind of the writer, not a little confusion of thought as to the real drift of many of his statements, since he repeatedly contradicts himself; as when he says that "phenomenal women" have demonstrated the capacity of their sex, and afterwards believes "woman to be the mental peer of man"—thus making the statement general which had been previously restricted to a few.

He states that he is "treating of the sex as a unit." It may then be fairly inferred, either that he believes such conditions as are described in numerous quotations from medical works to be normal, and, if normal, of course consistent with health and healthy cerebration, or that the sex, "as a unit," is an invalid. At the same time, woman is "the mental peer of man," notwithstanding this condition of chronic invalidism, and in spite of the fact that "her character has been made feeble by long habits of dependence," and "the sexual life developed at the expense of the intellectual." His philosophy seems to teach that woman's physical, and man's intellectual activities, result in an equal mental development for both.

In depicting the disabilities incident to marriage, he says: "Absolute insanity may accompany gestation, or follow parturition," and that to this cause the excess of female insane is referred by Dr. Maudsley. But in speaking of the evils of celibacy, he quotes that the dangers of marriage "are *infinitesimal* as compared with those of celibacy." Thus, unhappy woman is impaled on one or other horn of a dilemma, of which the one likely to throw her into an insane asylum seems least objectionable, since its dangers are represented as "infinitesimal," compared with the liabilities of the other.

One more example of self-contradiction will conclude this paragraph, and (in the words of our author) "I am glad to say that it bears directly and practically upon the matter" of the entire paper.

He quotes in effect as follows: At a meeting of the Gynæcological Society of Boston, in May, 1870, Dr. H. R. Storer is reported to have stated that the arguments usually employed against female physicians were, almost without exception, untenable; that some of the women, who were desirous of practising physic and surgery, were just as well educated for the work, had just as much inclination for it, and were as unflinching in the presence of suffering, or at the sight of blood, as were many male practitioners; that they had a right to demand an acknowledgement that, in these respects, they were as competent to practice as are a large proportion of "ourselves."

Stronger testimony in refutation of Dr. Van de Warker's theories could not be given.

It is true that Dr. Storer followed this acknowledgement with the promulgation of the famous and, at that time, new doctrine that women physicians must necessarily be incapacitated by the periodical disturbance of their faculties to which they were liable, in common with their non-professional sisters; but this, being a mere theory, has little weight compared with his positive testimony to the facts, as observed by himself and given above. Doubtless, his observations upon women physicians had covered the ground of whatever physical or mental disturbances they were subject to, and his testimony really amounts to the statement that while, in theory, they *ought* to be disabled, *in fact, they are not*.

The story of the typical woman who demonstrated her abilities in both domestic and professional life, by a success in each such as might be supposed to satisfy even a phenomenal woman—she having married and taken care of three successive husbands and several children, and this mainly during the successful practice of her profession; coming through with good health and exceptional professional courage, at the end of a functional life crowded with "mysterious" and "startling physiological acts" which had been "contending with each other for supremacy;" seemingly making of her organism a battle-ground upon which the woman (heaven save the mark, if this be science!) had to "contend with the inexorable law of reproduction;"—this story, I say, though calculated to discourage the male profession, ought to dispel any lingering doubts from the minds of even the most phenomenal of women. After such a demonstration of the compatibility of a

professional with a domestic and emotional life, surely no woman need hesitate to follow any and all of her proclivities!

Seriously, it would seem that there is a large amount of morbid cerebration (not to characterize it more particularly) among medical men in regard to these same "physiological acts." The fact that they are physiological ought to prevent their being considered "startling;" and while all physiological acts may with propriety be spoken of as "mysterious," it does not appear that the phenomena of reproduction are more so than many other vital processes.

The plan of argument adopted at different stages of this controversy is instructive in itself. The ground first taken by those opposed to the advancement of women into the higher departments of labor, was a natural want of intellectual ability; and here the discussion was apparently expected to end. But, for some reason (best known to those who abandoned the position), it did not end, and a stand was next made on the point of muscular insufficiency. Soon, however, recognizing the great truth that there are more powerful forces than the muscular at the command of human nature, this too has been given up, and the physical disabilities, directly and indirectly connected with her sex, have been brought to the front and paraded, *ad nauseam*. Dr. Storer is accredited with taking the initiative in this field, and Dr. Clarke has won distinguished laurels, while Dr. Holmes gives aid and comfort by the employment of witty barn-yard illustrations, combined with tender allusions to orange-blossoms and cypress buds; but to Dr. Van de Warker forever be the honor, while acknowledging woman's potential, if not her actual, physical equality, (mental equivalency being stated *de facto*,) of demonstrating, mainly by the brilliant imaginative story alluded to above, that woman's *tender heart* is really all that stands in the way of her triumphant success!

When, in his peroration, our author says: "It must be the intent of every woman who essays a professional life to do man's work as well as man can do it," it is difficult to follow his thought, since there is no standard of professional work among men; neither is the work done by a woman properly spoken of as man's work—the fact of its being done by her is a demonstration of the contrary; and it is doubtless the intent of every professional wo-

man to do her own work as well as she may find herself able under existing conditions.

Finally; the question whether the conditions which have resulted in the present relations of the sexes will operate as potently in the future as in the past, instead of being, as stated, difficult of answer, is already answered by the whole history of civilization; modification and change of the relations of the sexes being among its prominent features.

Dr. Van de Warker speaks of woman's social equality as "wrung from man during the period of classic civilization;" and says: "Of all things, mediæval woman alone did not retrograde." That her progress indeed belongs to "the civilizations which never go backward," has been abundantly proven.

The points which our author and others, whose views he represents, aim at establishing, are these: That woman's physical peculiarities, though not actually constituting her an invalid, are nevertheless so delicately balanced between health and disease, that the scale is liable to tip towards the invalid side at almost any moment of her existence; that she is, by her very nature, unfitted for posts of responsibility requiring any continuous mental strain, for her physical weaknesses almost necessarily involve mental ones, and her emotions are peculiarly "liable to assume morbid proportions."

History is full of instances of heroism among such women as have been thrown accidentally, as it were, into positions demanding the exercise of those qualities denominated, *par excellence*, masculine; and it will be difficult to prove that either physical or mental weakness necessarily accompanies the feminine phase of human nature, in the face of the facts that untiring energy and perseverance, unshrinking devotion to their life-work, and an unswerving faith in the final right adjustment of sexual relations, (which relations underlie so many of the problems of sociology,) are, and have been, prominent traits in the characters of all truly representative women.

It will be still more difficult to show that intellectual training is undesirable for women, considered either as individuals, or as the mothers and nurses of the race. Work, physical and mental, duly balanced, is conservative of health and necessary to vigor; responsibility strengthens character; while passive indulgence in

the immunities which society grants, if beyond the necessities of the case, is enfeebling and demoralizing.

It is a matter of common consciousness, and hence requires no argument to show, that the principles which underlie development are the same for both sexes. The law that exercise increases muscular power, is not sexual; nor that mental training develops mental force, and tends to secure that ascendancy of the intellectual over the emotional and instinctive traits, which more than anything else distinguishes man from the lower animals.

FRANCES EMILY WHITE, M. D.

SHERMAN'S MEMOIRS.¹

GENERAL SHERMAN has enriched the literature of the late Rebellion by two stout volumes of his *Memoirs* of that eventful period, characterized by all the marks of his peculiar genius. In his introductory chapters, he lingers lovingly on his early experiences as an officer of the Regular Army, in the South and California, where he witnessed the extraordinary events that distinguished the first seizure of that region by our forces, the discovery of gold, and the rapid rise of a wild territory into the beginning of a great and flourishing state. After a brief trial of army life under the tremendous changes of that speculative era, Sherman settles down as a banker in San Francisco; and as that venture was not very fortunate, he made a rapid succession of fresh efforts to gain a livelihood as a farmer, a miner, a lawyer, and finally as head of a Military Academy in Louisiana. There he saw the first shock of the Rebellion, and forecasting its far-reaching results, he resigned his position, came North to look for occupation, found it in the Presidency of a Street Railroad in St. Louis, and after refusing the position of Chief Clerk of the War Department, with the promise of being made assistant to the Secretary of War, offered his services unconditionally to the government, was appointed Colonel of a new Regiment of "Regulars," and soon after was assigned to

¹ *Memoirs of General Wm. T. Sherman.* By himself. Two vols. small 8vo. 400 pages each. Messrs. Appleton & Co., New York, 1875.

duty in the field. He took part in the disasters of the first battle of Bull Run, and then went to the West with his classmate at West Point, Gen. Geo. H. Thomas, to serve under General Robert Anderson, in organizing the Union Army in Kentucky. There he drew down on himself the bitter sneers and taunts of the newspaper war critics of the day, inspired no doubt by the civilians in the War Department, by telling the then Secretary that he wanted sixty thousand men for defence, and two hundred thousand men for offensive operations. A brief submission to the storms of abuse was soon followed by the brilliant successes of the great operations on the Tennessee and the Mississippi, and Grant, Thomas, Sherman and McPherson were universally recognized as among the foremost Generals of the Union forces. Sherman gives a stirring history of the great events of the campaign, or series of campaigns rather, that secured the Union armies the control of the great rivers of the West. Of his own misadventures at Vicksburg, he speaks with ingenuous frankness that disarms criticism; and while he praises Grant and his plans and their execution with unstinted admiration, he condemns McClellan for his unmilitary intrigues as well as for his civilian follies. Indeed nothing is more characteristic of Sherman than the calm way in which he distributes his praise and his blame, giving credit to his rebel opponents, Hood and Hardee, for bravery even to rashness, and to both Sidney Johnson and "Joe" Johnston for real military genius, and to Forrest for audacity and enterprise; while Wade Hampton, Beauregard and many others receive small mercy at his hands. To his own general officers, Sherman gives an equal measure of justice. Thomas is always right and "sure," but always "slow," both in Grant's eyes and Sherman's: upon Hooker he puts a lower estimate than he possessed in the East; Burnside he thought too easy-going at Knoxville, Mower he classes as a bold fighter, and Hazen and Kilpatrick are commended for their effective work and their gallantry. It is like recalling the stirring history of those times, to read Sherman's picturesque description of the operations around and below Chattanooga, and no other book can ever give there ality or authority with which he explains the decision as to the March to the Sea; how he arrived at it, aided ever by his knowledge of the country acquired when he was a subaltern on duty in Georgia and South Carolina, twenty years before; how he first got the approval

of the authorities at Washington, and slowly but surely brought over Thomas and Grant. The capture of Atlanta, the successes that followed his bold adventure, the seizure of Savannah, the renewed connection of his Army with the fleet under Dahlgren, and with Grant, all led the way to a further line of operations suggested by himself, and to which Grant only gradually was brought to agree. From Savannah, Sherman started out again; and he gives with great emphasis, his views of the serious task in hand, and of the thoroughness of his preparations. Much of this was not known to the public at the time, and the rapid succession of startling events led perhaps to underrating the steady progress of his armies northward, and the enormous help thus given to Grant's attacks on Richmond. The end came at last; and while the country was thrilled with the great events of the surrender of Lee's army and the forces under Johnston, the assassination of Lincoln swallowed up all other feeling. Sherman was involved in an angry controversy with Mr. Stanton as to the terms of his agreement with Johnston, and he naturally enough devotes a portion of his space to a vindication of his own action, showing that it was based on his instructions from Lincoln and Grant, and was not at all his own notion. While it is right thus to put upon record his part in the history of that event, it is all now separated from us by the rapid course of affairs since that time, and few persons will take an active partisan interest either for Sherman or Stanton. Whatever the faults or short-comings of those who labored for the Union, whether in field or council, death has given to many of them a release from all harsh criticism on their conduct.

Sherman's concluding chapters on the lessons of the war are pithy and practical; he asserts that the training of West Point made the good officers, and that the men of the volunteer forces were spoiled, wherever it was possible, by the bad system of enlistment and by bounties and other vicious conditions of service; yet he awards to men and officers, and to some of the states, great praise for the zeal with which they learned and the devotion with which they practiced the real business of war. He urges a total change of the system of independent bureau and staff departments, by which the general who is responsible for the conduct of a campaign or the handling of troops, is after all subordinated to quartermasters, commissaries, and other such inevitable neces-

saries of army life, who are in turn independent of everything and everybody except their own chief in Washington. His argument for a change is supported by the example of our own war and by that in France, where the German success was not a little due to their superior system of army government and regulations. It is of course easy to read between the lines, in this protest against the existing state of army affairs at Washington, with its separate offices, an explanation of his own preference for a command in the West; and this gives not a little zest to the appeal, based on his own experience of the army in war and peace, for a reorganization such as he suggests. In a few succinct paragraphs, Sherman hits off the difference between the operations of such an army as was that of our late war, acting in such a country as ours, and those in Europe, where the field of battle is a familiar ground, fitted for military evolutions, impossible in our great woodland tracts. Such in brief is a summary of Sherman's Memoirs, and in plan and execution and interest, his book is every way characteristic of the man, and well worthy his great reputation.

NEW BOOKS.

THE LIFE AND TIMES OF SIR PHILIP SIDNEY. New and revised edition. Pp. 286. Price \$1.50. New York: J. B. Ford & Co.

It is a singular fact that Sir Philip Sidney has been handled, in the few memoirs that we have of him, in a style that is artificial and ridiculous in the extreme. Of the book now under review we shall have something to say in this regard after briefly noticing Sir Fulke Greville's famous "Life of the renowned Sir Philip Sidney, with the true interest of England as it then stood in relation to all foreign princes, and particularly for suppressing the power of Spain, stated by him. His principal actions, counsels, designs and death. Together with a short account of the surnames and policies used by Queen Elizabeth in her government."

One would not expect to find this bold spirit, this firm seat in the lists, this lover of adventures, artfully dodging his subject even under such a comprehensive title, to air his own conceits and construct word-pictures to a degree that is positively dishonest. Yet the whole book contains not a date or an accurate or a valuable

fact, and is interesting more as a piece of singular English than as an account of Sir Philip Sidney. But this indirectness of style was common to the period, and those of Sidney's own productions most worth reading were written in wrath, or in the hurry of business, in the ecstasy or the disappointment of love, when he was too much in earnest to be roundabout. Sir Fulke Greville's idea of what a book notice ought to be, may be gathered from the following, taken out of several pages devoted to the *Arcadia* :

"To be short, the like and finer moralities offer themselves throughout that various and dainty work of his, for sounder judgements to exercise their spirits in ; so that if the infancie of these *Ideas*, determining in the first generation, yield the ingenuous Reader such pleasant and profitable diversity, both of flowers, and fruits, let him conceive if this excellent Image-maker had lived to finish and bring to perfection this extraordinary frame of his own Commonwealth : I meane the return of *Basilus*, from his dreams of humor, to the honor of his former estate ; the marriage of the two sisters with the two excellent Princes ; their issue ; the warres stirred up by Amphialus ; his marriage with Helena ; their successions ; together with the incident magnificences, pompes of state, providences of counsellors in treaties of peace, or alliance, summons of warres, and orderly execution of their disorders. I say, what a large field an active, able spirit should have had to walk in, let the advised reader conceive with grief."

Let the advised reader conceive with grief the taste of a man who could wish, and wish in such a style, a continuation of this image-making to unlimited generations. That the knight himself could on occasion command a more pointed style than that of the *Arcadia*, witness this letter to his father's secretary :

"MR. MOLLINEUX :

"Few wordes are best. My letters to my Father have come to the eyes of some ; neither can I condemne any but you for it. If it be so you, have plaide the very knave with me, and so I will make you know, if I have good prooffe of it ; but that for so much as is past, for that is to come, I assure you before God that if ever I knowe you to do so much as to reede any lettre I wryte to my father without his commandment or my consente, I will thruste my dagger into you. In the meantyme farewell.

"By me,

PHILIPPE SIDNEY."

The fourth chapter contains an account of the "first prize which did enfranchise this master spirit into the mysteries and affairs of state, and suggests some useful parallels between the religious condition of Germany now and then :

"And though to negotiate with that long-breathed Nation proves commonly a work in steel, where many strokes hardly leave any print ; yet did this Master *Genius* quickly stir up their cautious and

slow judgements to be sensible of the danger which threatened them hourly, by this fatal conjunction of *Rome's* undermining superstitions with the commanding forces of Spain. And when he had once awaked that confident nation to look up, he as easily made manifest unto them that neither their inland seat, vast multitude, confessed strength, wealth nor hollow-sounding Fame could secure their Dominions from the ambition of this brave aspiring Empire; howsoever by the like helps they had formerly bounded the same Roman and Austrian Supremacies. The reasons he alleged were because the manner of their conjunction was not like the ancient undertakers, who made open war by Proclamation; but craftily (from the infusion of *Rome*) to enter first by invisible traffique of souls; filling people's minds with apparitions of holines, specious Rites, Saints, Miracles, institutions of new Orders, reformations of old, blessings of Catholiques, cursings on Heritiques, Thunderbolts of Excommunication under the authority of their Mother Church. And when by these shadows they had gotten possession of the weak, discouraged the strong, divided the doubtful, and finely lulled inferior powers asleep; as the ancient Romans were wont to tame forrain nations with the word *Socij*; then to follow on with the Spanish, less spirituall but more forcible engines; viz: practice, confederacy, faction, money, treatyes, leagues of traffique, alliance by marriages, charge of rebellion, war, and all other acts of advantageous power."

So that Bismarck's invention is at least as old as the sixteenth century, when Spain occupied the foremost position in Europe that Germany does now, and the enlightened Prince makes desperate war on the Roman shadows of blessings, cursings, and excommunications, that are no longer followed by the forcible engines of Spain or any other dominion.

It is only of late years that history has become in any respect social. Political history we have on every hand from the earliest times, and can tell the fighting weight of Achilles and the exploits of warriors, and the dates, results and carnage of battles, with a moderate degree of certainty. But much further than this we cannot go. We know the generals, and even then not much of their private lives and dispositions; but we can claim small acquaintance with the captains of hundreds, and none at all with the hundreds themselves. And so the scant memorials of Sir Philip Sidney, whose career was not politically distinguished, leave us with the greatest disappointment that we know no more.

This account of a man who was an example of every manly virtue, is most fitly dedicated to the writer's son; and if he is very young, anywhere this side of the Sophomore class, he will read it with the admiration that the life itself is certain to inspire, in no degree checked by adjectives and stately periphrases and circum-

locutions in pursuit of very common quotations and historical tableaux.

Perhaps the author has been saturated with the style of Sidney's period, specimens of which we have given above, which M. Taine says is too strong for our weaker nerves and muscles, but which we suspect is not strong enough for our better reason.

The fault of the book is a lack of directness and system of style which is more common in the work of women than of men, because it is dropped just in proportion as strength is acquired. An effect-hunting, inflated recital of a simple and straightforward life, deserves great condemnation. If a thing be worth telling at all, let the narrator keep always in his mind the advice of the queen to old Polonius: "More matter with less art."

But the author appreciates to the full the rarity and worth of the character, whose loss at the age of thirty-two, though without any important part in public affairs, all England mourned. And certainly far above the parrot-training of our public schools would be the advantages derived from acquaintance with lives like this of the plain English knight, whose self-culture, independence, courage and modesty, made him the idol of his own day, and the peerless model of soldiers and gentlemen down to the present time. A little history of this kind would foster much wanted self-respect in the boys, and perhaps keep many of them out of jail. If Sidney's had been the triumph of might, of money, of conquest, of intrigue, we should have been bewildered with the smallest details of his life; but as his was the triumph of character, we have only the love of the people, the praise of the poets, and the memorials of his faithful friends. Many dead men have high-sounding epitaphs on their own marbles, but very few have one like this on the tomb of another:

"Fulke Greville, Servant to Queen Elizabeth,
Counsellor to King James, and Friend to
Sir Philip Sidney."

ISAAC CASAUBON. 1559-1614. *O Doctiorum quicquid est assurgite huic tam colendo nomini.* By Mark Pattison, Rector of Lincoln College. London. Longmans. 1875. pp. 553-8vo.

This is the characteristic title page of a very generous and useful contribution to the history of classical literature in Europe, in the era which was marked by the activity of Casaubon and Scaliger. The philology of that day is almost as far off us now as its theology or its politics, and yet with all of these Casaubon had more or less to do, and his biographer has given us a very fair picture of the man's influence on his times and of the times on him. Born a Protestant, in the little bit of France that remained true to its

faith in spite of prosecution and persecution, his academical activity was spent in Geneva, but there the intolerance of his fellow Protestants was so hard to bear that it almost drove him into the arms and hands of the Catholics at the court of France, where he was gladly welcomed. Seeking refuge from the risks of life incidental to the loss of Henry the Fourth and the change of feeling in Paris, Casaubon came to England and endured the hardships of necessary and frequent intercourse with the pedantic James; his hope of a permanent English home was realized in a sad sense, for he died in London in his fifty-fourth year, leaving his name and his reputation largely to the tender mercies of his new friends. What he did for science and learning is well told in this volume, but its main interest is due to the account it gives of the repeated interruptions and diversions, which took Casaubon from the work that he could have done better than any of his cotemporaries, to do that which any body else could have done.

It is little likely that in this busy work-a-day world of ours, any of us will turn to the originals or editions published by Scaliger, or Casaubon, or Grotius, or Erasmus, and we ought to make full and grateful acknowledgment to those who with larger leisure and opportunities, have given us biographies, detailing the mental and the visible features of these, the great men of an age long past. The Oxford Don has gone patiently through the vast array of learning now rendered useless by the advance of philological science, and he gives to his readers in brief, a summary of the enormous labor expended by Casaubon in the pursuit of knowledge, which by its very weight, overwhelmed him. Still the record of what he sought to do and of the small proportion of it that he really achieved, has its value and importance as enabling us to see how far literature too has gained in the growth of years, and with what advantages we of the nineteenth century can read the history of classic times, over and above the greatest students of earlier periods. There is a sadness in seeing the struggles of the hard Genevan Calvinists, to keep for themselves or else to keep silent the broader and kindlier Huguenot Frenchman, whose prodigious learning excited first the admiration, next the envy, and finally the maledictions of the Catholics, who would gladly have drawn the great scholar over to their side in the church. Failing that, they pelted him with hard words; but their abuse was easier to bear than the jealousy of his own Protestant brethren; and their efforts to deprive him of honor in their own communion and of his leadership in learning could only end, as they did, in narrowing the field of Protestant scholarship.

The various scenes through which Casaubon passed his brief, but burthened life, serve to give sharply contrasted pictures of the schools of Geneva and Montpelier, of the Courts of Paris and London, of the Universities in France and in England, of the learning

and instruction of the two countries, both of which laid claim to him and sought to secure his services to do credit to their love of knowledge. The sketch of the rise and progress of classical learning in Italy, in France, in Holland, in England and finally in Germany, is brief, but pithy and pointed. There is a good deal of mannerism in the authorship, a curious anxiety to set up a standard of printing, which is hardly worth the pains it takes to do it, and a sort of effort to display a creditable familiarity with modern languages, which serves at least to bring even the Rector of Lincoln down to the level of lesser men. Still he has accomplished a task which few scholars could or would have undertaken, and the result is to reopen for us a chapter of history that was almost forgotten. It saves from oblivion and recalls to life the moral and religious struggles of a period which has for us a few great names that alone survive the wreck of time. With Bacon we find that Casaubon had few and insignificant ties, that ended almost as soon as they had begun. With the other and greater men of Bacon's English contemporaries, the French Protestant scholar had no concern; and yet there is a decided interest in seeing what were the all-important topics of the King and his court, of the Bishops and the Universities, with Casaubon, at a time and even in the very city where Shakespeare and his dramatic fellow-workers lived and wrote. Poor Casaubon lies buried under piles of controversial abuse and this again under the dust of accumulated centuries, but in his own day and generation, he was and he deserved to be considered a prodigy of learning and industry, and the record of his life is well worth admiration and study and thoughtful reflection.

WARRINGTON'S MANUAL. By William S. Robinson, clerk of the House of Representatives of Massachusetts, from 1862 to 1873. 18mo. pp. 98.

Somebody has said that we understand the diffuse and remember the concise. It is still truer that after understanding the diffuse we understand and remember, that is we appropriate, the concise. At least that is the course all learning takes, as any one may prove by considering how much he has read and forgotten to acquire the formulæ, ideas and method that have become permanent. It is the common mistake of the learned to propose their own short cuts for the relief of beginners, not considering that every man gets to the concise in his own way. The short cut is perfect to the teacher, because it is the product of his own peculiarities and experience, but it never can be equally so to the learner unless and until he shall have gone through the same experience with the same peculiarities. To come to the point, lest this should seem to be reviewing for the sake of reviewing, the author states his desire to be to give parliamentary principle as

distinguished from practice, reason rather than rule: the result is, he gives us the principles as they are arranged—and very well arranged—in his own mind after long parliamentary practice. We could wish that the reasons had been more fully stated and illustrated. As it is, the book will be found most useful in the direct line of the author's experience, viz: to parliamentarians in legislative assemblies.

THE MAINTENANCE OF HEALTH. A Medical Work for Lay Readers. By J. Milner Fothergill, M. D. Pp. 366. 8vo. New York. G. P. Putnam's Sons.

Old Dr. Buchan inaugurated a new branch of medical literature when he published his *Domestic Medicine*, and was rewarded for it with the unqualified censure of the profession. Doctors still regarded themselves as a sort of privileged guild, whose secrets were to be kept to themselves, and equally abhorred the nostrum-dealer who kept a recipe secret from his brethren, and a writer of medical books for lay readers, who disclosed his brethren's secrets to their patients. There is much to be said in defence of this latter feeling. The nosology and the pharmacology of medicine should be kept in the hands of those whose special vocation it is to deal with them. The power of imagination in disease is reason enough why a sick man should not read and study about symptoms; and the lay meddling with drugs has always been a fertile source of disease. But the subject of hygiene is one whose public discussion can only do good on all hands, especially in these latter days, when health and life are coming forward in medical science as its normative conceptions. The faith of a physician, the true *religio medici*, is belief in health and life as the true state for a man, and the consequent determination to be intolerant of anything that detracts from them. The medical profession have not yet risen to the height of their vocation, since in practice they deal only with diseases and ailments, even though their object is health. They should come forward as the teachers of the laity, enforcing upon their attention the laws which determine health, and waging merciless war upon all practices, social and individual, which detract from it. There should be a medical as well as a theological pulpit in the land, and the day may come when the profession will rather correspond to that of the preacher than that of the Father Confessor.

Dr. Fothergill, a distinguished British physician, gives us in this book a series of excellent lay-sermons on the subject of health. He keeps the positive conception steadily before the reader from first to last, and makes the disturbances of health quite secondary matters. He has no special axe to grind; the only case where a little personal feeling comes out is in the discussion of vaccination

and its opponents. He is not run away with by any theory, and he sums up the *pro* and *con* of some hotly disputed questions with the gravity and deliberation of a judge. As to the use of alcohol, for instance, he states very fully all that has been actually proved as to its evil effects under certain conditions, and when used to excess; yet he maintains that it is a food, and exceedingly useful in many connections. Some may take exceptions to any such statement as tending to encourage the drunkard in the evil of his ways; but we think that what is here said, calmly and judicially, is far more likely to have just the opposite effect—for the dangers of drink are here stated in a connection and in a spirit which shows that the man speaks with deliberation and candor.

The book has one defect; it should have been edited by an experienced American physician, who might have supplied notes modifying its statements according to the differences produced by difference of climate and country. Many things that are right and safe in a climate as damp as England's, are most injurious or dangerous in our own.

THE CHEMISTRY OF LIGHT AND PHOTOGRAPHY. By Dr. Hermann Vogel, Professor in the Royal Industrial Academy of Berlin. With one hundred Illustrations. New York. Appleton's. 1875.

This is the fourteenth and last issued volume of the "International Scientific Series," of which we have noticed the various works already published. The editor of the series, and in the absence of any name of translator, responsible for its shortcomings, is Dr. E. L. Youmans, the editor of the *Popular Science Monthly*, and in that and a variety of ways, active in securing the publication of useful scientific manuals. There are, however, in these cheap serials, difficulties incidental to any Procrustean arrangement, by which great subjects and small, pure science and mechanics, ethics and physics, religion and politics, are all bound down to books of one size. We all smile at the classical scholar who chose his editions simply on the score of uniform size, and yet we are called upon to give unstinted praise to the publishers and editors of this and similar popular publications, because they are put at a price that is within everybody's reach. But to do this something must be sacrificed, and as often as not, it is the very essential of the author's original work. Here for example is a book by a well recognized authority on the subject of Photography and its application to art, science and industry, and we find in the Preface a reference to "tables annexed," which are nowhere to be found, although the absence of any reference to another work of an earlier issue in another language, leaves the impression that this is itself an original English publication. A concluding note signed E. L. Y. is directed mainly to supplement

the author's insufficient mention of Dr. J. W. Draper's services to Photography, and to do that gentleman justice; but it also refers significantly to the European editions of the work, so that indirectly only we learn from the editor that this is at least or at best a reissue of a book printed abroad. Now common literary honesty and bibliographical accuracy require that the date and place of the original, as the author first published it, should be given, and the time of each reprint or translation. A still more serious omission, to our minds, is the entire absence of any reference to the scientific work done by Mr. M. Carey Lea, of this city, in the study of photographic chemistry, and while the author may have had some reason for leaving out of his work all American inventions or appliances, the editor is hardly justified in reprinting it here with only a partial and apologetic correction of the matters that affect our American reputation for photographic science. But these errors and omissions apart, the book fills a very marked want in our literature of science, and we trust that the earnest exhortations of the author for more such chairs as that which he fills in Berlin, of instruction in Photography, will be heeded here. In this country and in this city Photography took almost its first impulse as a handmaid to the arts and as a daily application of science to our industries. It does not require a very great age to remember the success of Mayall in his Portraits, and his subsequent fame in London has not effaced the recollection of the good work done by him here in the infancy of his art. The Langenheims were pioneers in the business, now grown so great, of photographic supplies, and their clever mechanical appliances are still in use in a great many ways in the photographer's workshop.

The sketch of the development of Photography and of the growth of photo-chemistry is fairly well done, although in the course of it we come across another evidence of the imperfect way in which this book was conveyed out of the original into English. At page 49 there is reference to a Plate VI. to be found at page 245, and at that page is a similar mention of it as annexed, but there is no such plate, no such picture, and no explanation of its absence. All this is in itself of small importance as to the merit of the book, but it is a drawback as against the promises made in the advertisement of the series as accurate even to the requirements of science. The practical part of the book is little better than that of a score of working hand-books with which our photographers, amateur and professional, are already familiar; the scientific portion, both in its historical account and in its detail of the chemistry of light, is wanting in clearness and fullness of detail. The real substantial merit of the book is found to lie in the urgent appeal made by the author for fuller opportunity and means of photographic instruction, on the score of its manifold usefulness and application in science and the mechanic arts, in law, in medicine,

and in the fine arts. We hardly need to go to a Berlin professor to learn much about the advance in astronomy and in microscopic science due to the help derived from Photography, for in this country we were among the first and foremost to appreciate and avail ourselves of this useful handmaid to all reproductive art, and our own manufacturers and inventors have made it subservient to their daily needs. Still Vogel's book has merit, although not of the kind that we have a right to expect from the title of the work itself, or of the series in which it takes its place.

THE SCIENCE OF MUSIC; OR THE PHYSICAL BASIS OF MUSICAL HARMONY. By Sedley Taylor, M. A. Popular Science Library. Messrs. Appleton & Co. New York. 1875.

We have previously spoken in this magazine of the encouragement to be derived by all who believe the growing tendency toward the diffusion of a broad education to be a healthy movement, from the multiplication of small treatises on various branches of science written or edited by men of ability and standing.

The idea having been started, we believe, in England, it has now become the fashion for each of the great publishing houses to set forth a series of its own; and one or more of the volumes of the "Popular Science Library," the name chosen by the Messrs. Appleton for their particular series, have already been noticed in these pages.

We have read this little book with a great deal both of pleasure and profit. Mr. Taylor's style is so clear and his explanations so full and so lucid, without being in the least verbose, that no careful reader can fail to get a very satisfactory knowledge of the subject of which the book treats. At the same time there are plenty of things in it, of necessity, hard to be understood, and which lazy readers will, we fear, be tempted to skip, to the utter destruction of any good they might otherwise obtain.

The opening chapter describes, first, the cause of sound and the sensation it produces upon us, and secondly, the method and laws of transmission of sounds from the producing cause to our ears, ending by distinguishing between musical and non-musical sounds. The three following chapters treat respectively of Loudness and Pitch; of the phenomenon of Resonance and its laws; and on Quality of Sounds, distinguished as simple or composite. Then follows a description of the mechanism of some of the principal musical instruments, the organ, the piano-forte, violin, and the human voice, considered principally with reference to the quality of the sounds they emit; next, the connection between quality and the mode of vibration, and the phenomenon of two or more sounds producing silence, called "Interference," and "Beats." The eighth and ninth chapters discuss the theory of concord and

discord, opening with an account of Helmholtz's discovery of the nature of dissonance, and the tenth and concluding chapter, under the caption of Pure Intonation, shows how impossible it is with the present system of training to obtain voices of perfect purity and temperament, closing with a short account of, and eulogy upon, the system known as the "Tonic Sol-Fa."

The author more than once takes occasion to show the great value of the work done and the laws reasoned out and established by Helmholtz, and even goes so far as to rank him with Newton, *et id omne genus*; certainly we owe all our most valuable knowledge of the laws of sound to him.

We commend this book especially to Mr. R. G. White's perusal, and feel assured that, having read it, he will give over his efforts to persuade people that music being simply an *art*, it is a misnomer to speak of the "Science of Music."

ANNETTE; or The Chronicles of Bellevue. By Charlotte Walsingham. Claxton, Remsen & Haffelfinger. Pp. 374.

In our June number we noted the appearance of an able novel by a Philadelphia authoress, and now we are again gratified by finding in an American story unmistakable power and fertility of invention. The scene of *Annette* is laid in New Jersey, towards the end of the last century; and the description of P——, a collegiate town on the direct road from Philadelphia to New York, with its beautiful scenery and many churches, will sufficiently identify the place to many readers. The story is a domestic one, full of incidents and conversations which are well within a woman's sphere of observation and description; and the ease and unpretending refinement of style carry us on through chapter after chapter with a lively sense of amusement and interest which few contemporary novels afford. The main characters are well drawn and consistent. Herbert Wellesley, the young clergyman, thoroughly imbued with professional ideas, yet displaying a bright and genuine human nature beneath them; Walter Westbrooke, the hero of the book, and the strongest masculine character; Elizabeth, his sister, whose ascetic religion has not wholly withered her womanly tenderness and family affection; finally, *Annette* herself, simple, natural and lovable:—these are the principal actors in a story whose plot we will not disclose, but which we read with pleasure and lay down with regret.

A critic is not wholly a critic unless he find fault: so we will discharge our conscience at once. *Annette*, with all the merits of a first novel, its freshness and quick invention, has also some few of its faults. It has evidently been written *currente calamo*, and here and there is a careless sentence. The men are not so good as the women; no man, we think, would have been satisfied

with the evidence on which Walter believes his wife to be dead, or with that on which he afterwards thinks her living. The last chapters, moreover, into which the tragic element enters so largely, affect us like a dark and stormful ending to a pleasant day. The brightness and grace of the earlier part would have suited better with a happy close.

It is difficult to do justice to the story by quotation; its excellence is rather in the unrestrained flow of narrative and easy dialogue than in any special sentence. We give a short extract, such as our space allows. Annette is spending the day with the Wellesleys:

"We will show you," said Mr. Wellesley, "farming conducted on an entirely new scale. Mrs. Wellesley is at the head of everything, and the preservation of life is her hobby. The best in the garden goes to feed the pigs and chickens."

"It makes them nice and fat," said Mrs. Wellesley, complacently.

"Which would pay, in the end, if they made *us* nice and fat," said Mr. Wellesley, "but, bless your heart, Miss Purden, we are not allowed to kill them; that is considered inhumanity!"

"I get so much attached to them, dear," said Mrs. Wellesley, "that I cannot bear to think of their being killed."

"Then the dairy is beautiful to look at," continued Mr. Wellesley, "never a pan out of place, because there is no use for them; there being no cream to make butter with, owing to this philanthropic woman, who gives all the milk she can spare to the little dirty wretches who live in the neighborhood. Milk is not overplenty, at any rate, under this system of farming," he continued, "for we are not allowed to separate the calves from their mammas, until they are quite grown up."

"The mothers cry so, my dear," said Mrs. Wellesley apologetically, "that I really cannot bear it."

"Sometimes I am inclined to grumble a little," continued Mr. Wellesley, "when I find all the money going out and nothing coming in; but a walk over the farm with Mrs. Wellesley, and a vivid demonstration from her of how comfortable and happy everything is, soon restores my equanimity, and convinces me that hers is the true principle of farming."

When Herbert's father and mother discovered his attachment to Annette, they exchanged looks, but of a very different character. Mr. Wellesley's said, with evident amusement, "The young rogue has fallen in love," but his wife's said in dismay, "My boy loves some one more than me." Touches like these are frequent throughout the book. The progress of Walter's courtship, and the slow change of Annette's feelings from dislike to love, are especially well told.

We hope before long for another novel from "Charlotte Wal-

singham." We ask that it may be a little more careful in the plot, a little more concise in the style; as reader and critic, we ask for a happy ending; and for the rest, let it be as bright, as refined, as various and as interesting as *Annette*.

EVERGLADE TO CAÑON. The Regimental History of the 2d Cavalry. Van Nostrand. New York.

Not long since a work in three volumes was issued, devoted to the regimental history of the famous British Grenadiers, which was one of the ways of celebrating their second centennial. We have lately received the prospectus of a similar memorial of the Second Dragoons, or Second United States Cavalry, which promises to do for the regular service, or at least this arm of it, what the volunteers did for a good many regiments—the Sixth Pennsylvania Cavalry, Rush's Lancers, and many other regiments having found enough material in their service during the war of the Rebellion to fill a volume apiece. Here we have the promise of a regimental life that, beginning in 1836, is still flourishing in vigor, with a prospect of a long career of hard work before it. The book now in hand bears the rather flowery title, *From Everglade to Cañon*, with the Second Dragoons, (2d U. S. Cavalry,) an authentic account of service in Florida, Mexico, Virginia and the Indian country, including the personal recollections of distinguished officers, anecdotes, ballads, etc., with an appendix containing orders, reports of operations and correspondence, battles of the regiment, military records of officers, roll of honor, list of stations, etc., from 1836 to 1875! It is to be compiled by Theo. F. Rodenbough, Colonel and Brevet Brigadier General U. S. A., himself a native of this State, and an officer appointed from private life, who distinguished himself in service, and left it shorn of his right arm, which he lost in battle. The book will be illustrated with six full page chromo-lithographs, eight photo-portraits, two maps and some pen and ink sketches, and it is to be printed at the Riverside Press at Cambridge, a promise of good outward appearance. It will be a story of American Military Service during the last forty years, and if by the encouragement set to this example, others are led to prepare regimental histories, we shall soon have abundant material for the best record of our army both in war and in peace. General Rodenbough has secured the co-operation of other and older officers; General Cooke, Colonel Lee, Major Thompson and Captain Bates, contribute Indian and frontier reminiscences, giving graphic pictures of life in the mounted service; General Merritt describes cavalry operations in the Army of the Potomac during the year 1863, with remarks upon the lessons of the war as applied to mounted troops; Colonels Leoser and Harrison give their experiences under Sheridan in 1864, and Lieutenant Doane will furnish a record of the part taken by the regiment in exploring and

developing the Yellowstone National Park. Beginning its existence in the time of the Florida war, the events of that tedious struggle will first be given; then follow the events of the war with Mexico, the peace that followed carrying the regiment to California, Texas, New Mexico, Kansas and Utah. To this period belongs a very attractive feature of the book, the notes selected from the diary of an intelligent enlisted man, eventually a non-commissioned officer, Chief Bugler William Drown, who saw twenty years' service in the Dragoons, and who seldom permitted a day to pass for nearly fifteen years without writing something in his journal. As this man was a good soldier, popular with his comrades, possessing most of their virtues and some of their vices, it enables the reader to get a glimpse behind the scenes at the inner life of the so-called automaton regular, such as is seldom given even to the commissioned superior or to the civilian looker-on.

The events of the war of the Rebellion are recited in successive chapters, giving the history of the Cavalry School at Carlisle, the operations of the regiment—part of it in New Mexico until late in 1862, while the rest was doing its duty in the Peninsula, and the regiment was not at work as a whole until the opening of the great cavalry operations of the Army of the Potomac. The first of the raids which did so much to secure ultimate success, and the campaigns in the Valley of Virginia are told at length, while the experiences of prison life in the various quarters assigned to captured officers, are recited by one of those who shared their hardships and survived them. The events of the period since the war have to do with Indian campaigns and frontier expeditions, and are very characteristic of the kind of work assigned to the cavalry arm of the United States army in peace times. A Roll of Honor is added, in which the extraordinary deeds of enlisted men are recited, as a slight encouragement to a class whose share in achieving military successes is too often ignored and easily forgotten. When the history of the Second Cavalry is completed, we shall look with interest, to see how far the execution has corresponded with the promise held forth in the prospectus. The forthcoming volume, which is to give the history of the First City Troop, as a memorial of its recent centenary, will furnish a capital means of contrasting the record of militia and regular soldiers. The City Troop has always been ready to take its place in the field in the great military operations of our national history, while the Second Cavalry has done its work alike in peace and war, and bids fair to merit a long life of usefulness and activity in our hard-worked regular army.

SEX IN INDUSTRY. A Plea for the Working Girl. By Azel Ames, Jr., M. D. 16mo., cloth. Pp. 158. Price \$1.25. Boston: Jas. R. Osgood & Co.

James R. Osgood & Co. have published a book which will ex-

cite as much attention among thoughtful people and students of Social Science as did "Sex in Education." "Sex in Industry. A Plea for the Working Girl," by Dr Azel Ames, Jr., shows the great and almost insurmountable difficulties under which women must compete with men in any business. Dr. Ames states his points clearly and argues at considerable length, but the remedies which he proposes are certainly inadequate. That feeble women and girls under fifteen years ought not to be engaged in any regular and severe occupation needs no argument: and it is clear to all, that women however strong, need more frequent vacations than man, and that while it is hurtful for men to stand continuously, women are unable to do so. There are many feeble women and young girls who must work, since no one is willing to support them. And it is our duty to make their labor as easy and as agreeable as possible. Therefore, while to our minds Dr. Ames has by no means solved the difficulty, his suggestions are worth careful study. He himself condenses them at the end of his book as follows:

"To frame laws to meet the demands of the principles I have recognized, under all their varying conditions, is not a task for this space, nor one to be readily accomplished; but we may fairly consider, in brief, some of the ends it is specially desirable should receive the appreciation of the public in general, and the employer in particular, and, it is to be hoped, will eventually find their recognition in law. It is believed—

"That the employment at labor of any girl under 15 years of age should not be allowed.

"That the employment of girls of other ages—and women generally—at employment unsuited to their sex, should not be suffered (such employments being determined by a council of salubrity, in France, composed of those most eminently fit for their high commission).

"That, in such employments as women should be admitted to, they should be permitted a "periodical absence," without pecuniary loss, for such time as might be just and necessary.

"That in employments where women should be admitted and which require high degrees of mental concentration, with physical energy, additional vacations of sufficient extent should be the right of the employé.

"That, in all employments, it should be obligatory upon the employer to conduct the processes of the occupation under the most advantageous conditions to health, and to secure all improvements in this regard that may become approved.

"That in all larger manufactories (of over certain numbers of employés) there should be special sanitary supervision at the expense of the proprietors.

"That there should be a well-established examination and certi-

fication of all employés, male and female, proposing to engage in any deleterious or burdensome employ—only those being certified who are found in the possession of health not to be unduly impaired thereby, and only such to be employed as are certified.”

THE KEYS OF THE CREEDS. Pp., viii., 201, 8vo. New York: G. P. Putnam's Sons.

This is certainly one of the most curious books of the season, yet it is not one of those that will cause a sensation. It is anonymous, but its author tells us that he is a priest of the Roman Catholic Church, after having been in the ministry of the Church of England; that he regards himself as conscientious in retaining the former position. He holds to Catholicism in its opposition to Protestantism. Yet he has submitted all the doctrines of the Catholic Church to a process of idealization, which has transformed them into a sort of philosophy, which certainly does not correspond to any existing interpretation of historical Christianity. He regards the various religions of the world as the evolution of the human mind in various stages of advancement, and in Christianity he sees only that which corresponds to the most intellectual, moral and spiritual stage of humanity yet reached. That he regards Christian revelation as containing any supernatural and *ab extra* element, or as speaking with any authority to men, we cannot see.

Such a line of thought seems to us a very natural revolt from the merely dogmatic and historical statements of Christianity which are now the usual forms of its presentation. It is either the answer to all human aspirations, and the key to all the creeds of mankind, or it is less than the final creed of mankind will be. Not indeed that all Christian teachers have been thus unwisely one-sided and unphilosophical. But our author is too much under the influence of his own reactionary one-sidedness to appreciate them at their true worth. Thus he speaks of the late Frederick Denison Maurice as “surpassing in theological insight all others of his communion”—as a man “pure, intense, spiritual-minded and laborious,” and yet as one who “failed to grasp a single abstract truth with such distinctness as to enable him to make it clear to any one.” There are hosts of persons of at least average sanity and logical perception, who would declare that Mr. Maurice not only enabled them to get a new and firmer hold of all the truths by which men live—whether those truths are “abstract” or not is of less consequence—but also enabled them to understand and sympathize with those from whom they most profoundly differ, and to seek for the fragment of truth that gives their belief vitality.

BOOKS RECEIVED.

- A Short History of the English People. By J. R. Green, M. A., with maps and tables. 8vo. Cloth. Pp. 823. Price \$1.75. Harper Bros. New York: 1875.
- Epochs of History. The Thirty Years' War, 1618-1648. By Samuel Rawson Gardiner. The Houses of Lancaster and York: with the Conquest and Loss of France. By James Gairdner. The French Revolution and First Empire: an Historical Sketch. By William O'Connor Morris. 16mo. Cloth. Price \$1.00 each. Messrs. Scribner, Armstrong & Co. New York. 1875.
- The Keys of the Creeds. Cloth. 16mo. Pp. 201. Price \$1.25. New York: G. P. Putnam's Sons. 1875. [J. B. Lippincott & Co.]
- We and our Neighbors: or the Records of an Unfashionable Street. A novel. By Harriet Beecher Stowe. With Illustrations. 12mo. Pp. 478. Price \$1.75. New York: J. B. Ford & Co.
- The Abuse of Maternity. By Elizabeth Edson Evans. Crown. 8vo. Pp. 120. Philadelphia: J. B. Lippincott & Co.
- The Mirror of the Mind. A Poem. By Algernon Sydney Logan. 16mo. Gilt. Price \$1.50. G. P. Putnam's Sons. New York.
- Ocean Born. Oliver Optic's Yacht Club Series. Price \$1.50. Boston: Lee & Shepard. 1875.
- Socialistic, Communistic, Mutualistic, and Financial Fragments. By William B. Greene. 12mo. Cloth. Pp. 271. \$1.50. Boston: Lee & Shepard. 1875.
- The Morals of Abou Ben Adhem. Edited by D. R. Locke. (Petroleum V. Nasby). Price \$1.50. Pp. 231. Boston: Lee & Shepard. 1875.
- Storms: their Nature, Classification and Laws. With the means of predicting them by their embodiments, the clouds. By William Blasius. Crown. 8vo. Cloth extra. Price \$2.50. Philadelphia: Porter & Coates. 1875.
- Oldbury. By Annie Keary. International Series. 8vo. Pp. 420. Price \$1.25. Philadelphia: Porter & Coates. 1875.
- Religion and Science in their Relations to Philosophy. An Essay on the present state of the Sciences. Read before the Philosophical Society of Washington. By Charles W. Shields, D. D. Price 75 cents. New York: Scribner, Armstrong & Co.
- The Recent Origin of Man, as illustrated by Geology and the Modern Science of Prehistoric Archaeology. By James C. Southall. Illustrated. Pp. 606. Price \$6.00. Philadelphia: J. B. Lippincott & Co.
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THE
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THE MONTH.

NO expedition that has yet attempted to solve the mysteries of the Arctic regions has equaled, in point of preparation and equipment, that which left England last month. Everything that science or experience could suggest has been done to make it a success. The vessels chosen for the voyage are well adapted for their work: all the officers and many of the men have been tried in the rough experiences of the Arctic life, and the prospect of success is fairer than that which has attended the departure of any of the expeditions which have made up the history of exploration in the North. The intention of Captain Nares is to push as far north as possible this year, and establish his winter quarters in some well chosen spot. In March he will start northward on sledges, with the hope of reaching the Pole and returning by the following September; but the plans of the expedition include the possibility of its remaining through a second winter. These calculations are based upon the theory that the open Polar Sea of Dr. Kane does not exist, but it is this uncertainty that doubtless renders such an undertaking attractive. There was something pathetic in the desperate illness of Lady Franklin at the moment of the expedition's departure. She has partially recovered, and it may devoutly be wished that she shall live to see its safe return after a successful exploration of those mysterious regions with which her name must

be forever honorably associated. Few fields remain now for the spirit of adventure ; Asia, America and the heart of Africa have no longer any secrets ; and if this expedition, so well equipped and so systematically planned, shall at last unlock the regions of the Pole, the would-be explorer of the future will have nothing to do but weep in vain for other worlds.

THE question of a Royal residence in Ireland has been again mooted, and this time in a more direct and practical way. But after a short discussion in the House of Commons, it received a quietus, for the time at least, at the hands of Mr. Disraeli, who requested the mover to withdraw the proposition, on the ground that the matter should be left to the free will and inclination of Her Majesty. The Queen, however, is not likely at her age to do anything about it. She comes into London but once or twice a year, and then only for a day, and never allows either the business of the State or the claims of country or hospitality to interfere with her journeys to Balmoral. That she will take so troublesome a step as would be to her the purchase and arrangement of a country seat in Ireland, with any idea of occupying it, simply from motives of policy, can hardly be expected ; and she is much less likely to incur the expense without the advantage. The great can always purchase popularity at the cheapest price ; and it is so easy for a person in the Queen's position to make herself beloved that one may wonder that she does not do so. The Irish would undoubtedly have welcomed the Royal family to a home among them with loyal enthusiasm, but the matter has now been so much and so freely discussed that as a question of policy the time for it seems to have gone by.

THE American Riflemen have done extremely well. Their victory was fairly and honorably won, and the good sense they have shown in letting nothing tempt them to imperil the glory of it is certainly commendable. What an Irish rifleman has written of them is doubtless true—there are many individual shots who can do as well as they, but in point of discipline and spirit they are unequaled, and as a team could not be beaten by any that the United Kingdom could produce. Col. Gildersleeve took occasion the other day (at one of the innumerable banquets which

have been given to the Americans) to disabuse the minds of his hearers of the idea that America is a nation of riflemen. An Irish paper has attributed the success of the strangers to the fact that the team was picked out of 40,000,000 of men accustomed from boyhood to handle the rifle, while the Irish was taken from 5,000,000, of whom but few are familiar with the weapon. Indeed, the number of Englishmen who imagine that the ordinary American goes about with a bowie-knife in his boot, a revolver in his belt, in one hand a whisky cock-tail and in the other his "trusty rifle," is by no means small. To those who suppose it to be the daily practice of the American youth in his moments of relaxation, as he wanders up and down Broadway or Chestnut street, to stop every now and then, and then with unerring aim knock off the heads of the squirrels as they sport upon the forest trees that line those rural avenues, the skill of the American team would seem a matter of course. The truth is, however, that in shooting, as in most other sports, the Englishmen who become experts outnumber us five to one. The proportion of Americans in the Eastern States who are accustomed to the rifle or the shot-gun is infinitely less than those of the same class of Englishmen. Shooting has never been the fashion here as it has always been in England, and the success of Gildersleeve and his friends is in no way due to any national habit or characteristic. It is simply the logical result of careful practice and strict discipline, which has bred proficiency in a manly sport in which few of us take an active interest, and far less excel.

THE Sultan of Zanzibar was not very cordially received at the outset, but he has now become the fashion. He is described as a handsome man, of fair intelligence, and the impression that he has made is far more favorable to him personally than that produced by the Shah. The old world and the new—the East and West—are not only brought face to face now-a-days; they are made to shake hands and embrace. Certainly the visits to the capitals of Europe of the Sultan, the Shah, and this potentate of Zanzibar, will bear useful fruit in times to come. It is always the first step which costs; while little influence may be exerted on those individuals personally, their visits have made future ones possible, while the educating influence of such experiences on the minds of

those about them, cannot be exaggerated. Familiarity breeds mutual regard and understanding as often as contempt, and more of it among the nations will do far greater service in preventing war than all the murderous inventions on the one hand, or Peace Societies on the other, that ever were invented by ingenious and ingenuous man.

THE floods in France have done unprecedented injury. Hundreds of lives have been lost and millions of property destroyed. The President has been to the scene of disaster, the Government is doing all in its power, and the newspapers teem with accounts of the destruction and with appeals for succor for the suffering. There seems to be no way of arresting such calamities as these. The rivers in the south of France are generally as well-behaved as any in the world, and no wisdom or foresight can prepare for such an unexpected and unprecedented flood. The destruction of property is in most cases complete, and the utter loss of so much capital must be felt even at a distance. The telegraph reports that the number of lives lost amounts to more than a thousand, that in Toulouse alone eight hundred houses have fallen and twenty thousand people are without the means of subsistence. The rains which have produced these calamities were not confined to France, for at Buda and Pesth the rising Danube has also done immense injury to property, and also occasioned loss of life. The share of rain which belongs here has evidently this spring been falling on the wrong side of the Atlantic.

THE bulletins from Spain are generally meagre, and this month they form no exception to that rule. It appears from them, however, that General Jovellar has gained a substantial advantage and the Carlists under Dorregaray are reported in full retreat. Fortune has been more fickle than ever during this civil war in Spain, and the next telegram may bring us the reverse of all this. Indeed, there is no limit in point of time to a war of this irregular and guerilla kind. Don Carlos has great strength with the majority of the inhabitants in certain of the provinces, and while the prospect of overthrowing Alfonso and capturing Madrid has at no time been favorable, he can readily keep up the evils, if he can gain none of the advantages of war. The reactionary and des-

otic behavior of Alfonso's government have deprived him of the sympathy of liberal-minded Europe; and if the majority wish him success against his cousin, it is not because they love him more but Don Carlos less. Between two such millstones unfortunate Spain is likely to be ground for some time to come. It is a pity that they cannot be put about the necks of Bigotry and Intolerance, and cast with them into the sea.

WE are now fairly in the Centennial period. Beginning with the celebration of the meeting of the First Congress last September, we have now commemorated the battles of Lexington and Concord and Bunker Hill, the capture of Ticonderoga, and the formal taking of command of the Army by Washington under the Cambridge Elm. In some respects the celebration of the one hundredth anniversary of Bunker Hill was a great success. The intellectual and literary part was perhaps not worthy of the occasion. Judge Davis's oration was not a great oration, but it was interesting and well delivered. The occasion was one which a genius might have improved to advantage, but nothing short of genius could have composed an oration worthy to be called great on a theme on which Webster and Everett have done their best. A mortal without wings could hardly have climbed higher than such heads as theirs, and Judge Davis did not attempt it. But the celebration was remarkable for the opportunity it gave, which was so well improved, of showing hospitality and welcome to the South. A few days like the 17th of June will do more to destroy the passions of the Rebellion and put out its smouldering ashes, than all the Force Bills that could be drafted, backed by a thousand Sheridans. It has often been said that the South would have never seceded had it known the North, and it is true that there is no pacificator like friendship and mutual regard. The Southern men who visited Boston on the 17th of June will go home the Evangelists of a Gospel of Re-Union and Peace, and even now their influence can be felt. Of course the matter may be a little overdone. The enthusiasm of the Bostonians was heightened by the nervous desire to impress their hearty welcome on their once rebellious brethren, and on both sides there was a little unnecessary, but entirely natural, "gush." But when this shall have given way to a more sober and steady feeling, we shall

all have occasion to be thankful that the opportunity came and was so well made use of.

THE legal profession of Philadelphia has been deprived of an old and sterling member by the death of the late George M. Stroud. He had attained with unusual physical vigor and with clear mental faculties his eighty-first year, and he was cut down by over-exertion in finding out a sick woman who was anxious to get into the Episcopal Hospital. The charitable office that proved the immediate cause of his death was the last ornament of a long life spent more in relieving the necessities of others than in maturing plans for his own advancement. His memory has enough willing witnesses of his private life, and it is the purpose of this short note to consider only the last public act of his career.

Judge Stroud came to the bench by appointment and remained upon it by election through a term of thirty-five years. The last words he uttered from the bench were to the bar meeting held on the occasion of his retirement. And they were principally words of warning and advice as to the danger of the election of the judiciary, and the necessity of returning to the system of appointment. And this was a subject which those who knew his sensitiveness felt he would not, as one of the last judges by appointment, have touched upon except from the profoundest conviction of duty. His long experience, faithful service and great age, gave to his remarks on that occasion almost the weight and solemnity of dying declarations. And the bar must feel now that soon no man like him will be able to attain judicial honors. We say soon, because the office is new on the tickets, and, if such a thing can be, somewhat sacred to the party leaders. When they have become shameless through handling it, no man, it is safe to predict, will be made a judge who is not a hand-shaker of the strikers and beholden to the repeaters. We may presume that men sensitive of honor will not compete in the race of diligence for the bench. And this change in our political system was finally confirmed by the new constitution, which took away all the powers worth having from a corrupted legislature and conferred them upon an incorruptible judiciary. These words would be lacking in respect for the dead if they were not written sincerely of our present courts, every member of

which has deserved and earned the confidence of the bar. But do these gentlemen feel differently from Judge Stroud, who himself received his last appointment from the people?

THE jury in the Beecher trial were too good a representation of the whole community to be able to reach any satisfactory conclusion. While the popular faith in the method of jury procedure as a means of reaching the truth is by no means lively at present, there was a disposition to look to the verdict as at least a formal solution of an insoluble puzzle, which would enable people to regard the whole thing as disposed of. But the jury have not given us this much of satisfaction, and we do not even certainly know to which side the majority inclined.

We hope that the whole of this unsavory business is now to be decently buried and forgotten. It has poisoned the air long enough, in all conscience. Anybody concerned in the case that feels satisfied with the part he has played, will not be begrudged that sensation. As to the chief actor in the case, while we are by no means convinced of his guilt, we must feel, after the disclosures made on the trial, that he is not the man that the American people took him to be. On his own showing, his ideals of life and duty are dreadfully lacking in many essential ethical elements. His conceptions of Christian character are not those that we expected in so eminent a popular teacher.

The most important question, perhaps, is the relation of the popular mind to the whole scandal, and we think that in this regard the condition of affairs is quite satisfactory. Sixty years ago, if such a charge had been brought against a prominent minister, all the interests he was supposed to represent would have received corresponding damage. The disposition to assume not only the truth of such charges, but also that the facts were but fair specimens of the intercourse of the clerical class with the rest of mankind, was far stronger than at present. It was about 1818 that the tide turned, and that the then waning influence of the Christian churches began to gain that comparative ascendancy which they now possess in American society. No scandal against this or that individual member has the least power to shake in the public esteem the great mass of their order and the interests it represents.

THE Commencement season has been unusually prolific of noticeable talk. Gov. Chamberlain of South Carolina, President Woolsey of Yale, and the Hon. Charles Francis Adams, have delivered orations within the month which have attracted attention. It is a healthy sign of the thought of the times when men of authority, in their counsels to the young, dwell upon politics and subjects of a kindred nature. There are no dangers greater than those which flow from the apathy of the better educated and more intelligent classes of this country and their want of interest in public affairs, and when the danger is so strongly dwelt upon, there may be hope of improvement and change. In Yale College a department of political study has been established within a few years, and particular stress is laid upon the duty of the educated citizen in a free State to take part in politics. The discussion of these topics on the platform and in the public journals must produce good results, and is a very encouraging feature of the times. Mr. Adams in his address at Amherst points out the value of the orator under free institutions like ours, and combats the too prevalent idea that oratory has ceased to be a useful art. President Woolsey thinks that the true cure for the political evils of the day lies in the elevation and purification of the individual man, and both he and Mr. Adams urge upon their hearers the duty of becoming active politicians. A curious contrast to the healthy tone and true philosophy of these orations may be found in the speech delivered recently at the University of Virginia, by a Colonel Preston, and in a letter of a Mr. Hilliard, of Georgia or Alabama. The speech reads like the giving out of some fire-eater of the years between '58 and '61, and seems to have been mislaid and turned up after all these years by mistake. It is an anachronism. It devotes space and much flowery rhetoric to proving that the passengers in the ships that landed at Jamestown were high-toned, chivalric gentlemen, with a philanthropic turn of mind, while the cargo of the Mayflower was made up of the scourgings of English prisons—of curs and creatures of low degree. The moral which Mr. Preston draws is plain, and he enforces it with an abundance of sulphurous, flaming rhetoric. Mr. Hilliard's letter is pitched in a different key. He bewails the loss of his liberty and things, and declines to take part in the 4th of July celebration, because, poor man, he has nothing to celebrate. He, too, belongs to

another epoch than the present, and is, perhaps, unfit for the future. Like Admiral Semmes, he glories in the name of Irreconcilable. But the time for such sentiments as these has long gone by, and they can do no further harm either to North or South. The Southern people are too sensible not to accept the inevitable and logical results of their own acts, and in many ways they are showing their acquiescence in them. The "nurslings" of Virginia, as Mr. Preston called his hearers, have been taught in a different school, or at least have learned the lesson which he could not; and the protests which come from all parts of the late Confederacy against such sentiments as he has given utterance to, show that the long-suffering people are no longer willing to be held responsible for the intemperate talk of a few mad-caps who live among them.

THE University of Pennsylvania, after about a hundred years of what we might call adversity, is promising to regain the eminent position she occupied in colonial times. After various changes in the enlargement of the courses of study, and the securing of new and convenient buildings, and the establishment of a school of science, the age of endowments has begun for her. The gifts of Messrs. Whitney and Williamson we have already chronicled; and we are now glad to add that our late fellow citizen, Mr. Towne, has made the University his residuary legatee, with the proviso that the money thus realized be expended in paying the salaries of professors and instructors in the new Department of Science. What the University will receive after all settlements are made and various life interests expire is variously estimated even by those who are best informed; some put the sum as high as a million dollars. This is the largest single gift to the cause of scientific education ever made in America, and has been very properly acknowledged in the change of the style of the Department to that of the Towne Scientific School. Especially wise is the proviso which transfers this new endowment to the general endowment fund, instead of laying down petty conditions as to its expenditure on this or that chair. As all experience shows, special endowments make colleges and universities permanently poor, as they raise expectations which can only be fulfilled by outlays of other moneys which are much needed in other directions.

It has been suggested, and we give the suggestion for what it is worth, that an appropriate way of acknowledging Mr. Towne's munificence would be some arrangement to connect the School which bears his name with the public schools of the city, by admitting every year a certain number of the best prepared graduates of the grammar schools, either at reduced rates of payment or gratuitously. This arrangement need not be in any way offensive to those who are benefited by it; all our colleges and universities are public charities, in which the cost of the education given far exceeds the fees received from the student; it is merely a question of less or more. The outlay of any of the city's income in paying even reduced fees would, of course, be opposed as inconsistent with the maintenance of the High School. The feasibility of the plan is necessarily a matter for the decision of those who control the finances of the University, as nobody outside their number is competent to say what can or cannot be done in the matter.

Following close upon Mr. Towne, Mr. Wall Flower leaves the University an estate estimated, after all deductions, as worth some \$200,000 for the establishment of an observatory; and unless the heirs-at-law succeed in their threatened attempt to break the will, a very necessary part of the outfit of the institution will be at last supplied. Yet, large as the sum is, it will not be enough to build, equip and man an observatory after the style of those that exist in Europe. An observatory is not chiefly a building and instruments; it is a staff of competent observers, and the smallest number that a first class institution can get on with is six—two principals, each supported by two assistants, to relieve each other. That some American college observatories—that of the Western University of Pennsylvania in Alleghany for instance, and that of Hamilton College—have done fair service without such a staff, is true enough, just as various other wonders have been effected by very persevering men in spite of great obstacles. But the object of the endowment of research is to remove obstacles, not to set men to see how far they can be overcome by unaided strength.

Two other departments of the University are about to undergo new development. The Law Department at last takes its true place in our city—corresponding to that so long and prosperously held by that of Columbia College in New York city—through the decision of our courts to accept its diploma as sufficient evidence

that the candidate for the bar has gone through a satisfactory course of study. In the Medical Department the graded system of study, long pleaded for by our national medical societies, and already adopted at Harvard College, is now to be introduced. As this transition involves a probable temporary diminution in the receipts from students, it involves a change in the relation of the department to the Board of Trustees, who will hereafter control its finances, fix and pay salaries, and be responsible for deficiencies. The immediate deficiency is to be met by a subscription, towards which Mr. J. Gillingham Fell has generously subscribed \$5,000 for three years.

OHIO is now the battle-ground. Governor Allen is supposed to be a Jackson Democrat, one of the hardest of the hard-money school; but the only plank in the platform on which he has to stand, which is of any general interest, is one which represents the opposite theory. It may be doubted, perhaps, whether it was the intention of those who forced the inflation plank through the convention to make it so important and significant a feature of the canvass, but it turns out to be the point on which everything turns. Judge Kelley has gone out to Ohio to enlighten his fellow citizens on the subject of his intro-convertible-elastic-self-adjusting bonds, and Republican though he be, will make a speech directly in favor of the Democratic side of the argument. General Butler too has announced his intention to take part in the contest, and on the same side, because he regards the money question involved as of more importance than all others, and in this last view he is right. The situation is extremely interesting. By the change of her time of voting, Pennsylvania has ceased to be the important State, and Ohio stands alone. Both parties will necessarily make every effort to carry the election, and the result will directly affect the Presidential contest of next year. The action of the Democrats in making themselves the champions of the paper money party gives the Republicans another excellent chance, and illustrates the extraordinary luck of that party in its decline. It has now the opportunity of rallying to itself all the Independents and Liberals, who are chiefly hard-money men, and even a large number of Democrats who regard the currency question as the great issue of the times, and this late action of the party in Ohio as a

fatal and even a wicked blunder. Hitherto the parties have been fairly enough divided, Tilden, Bayard, Thurman and Hendricks standing beside Blaine, Conkling and Dawes—Gordon, Pendleton, Merriman and McCreery striking hands with Logan, Morton and Butler. The Republicans have been nearly as much identified with Mr. Pendleton's views as the Democrats with Mr. Kelley's, but the present move of the Democrats in Ohio gives their opponents a chance to seize and occupy for their own the stronger ground. Unfortunately, they will wait until the Ohio election has proved the strength or weakness of the inflation theory. This is not good strategy; it is not even good politics. It may be the shrewdness of the politician who seeks for votes on any platform; it is not the wisdom of the statesman who wishes for the right to win.

CONSCIOUSNESS IN EVOLUTION.¹

I. PRELIMINARY.

THE evidence of what is termed "design" in the structure of beings exhibiting life, is often appealed to by one class of thinkers, as proving the intervention of a personal Deity in the creation of such; and the same feature exhibited in the movements of living creatures is regarded by metaphysicians of a similar class, as an indication of their possession of a power of choice, or "free agency," at least in the case of man. The opposing school, of whom Professor Bain may be selected as an example, believes that designed acts are without an element of freedom, but are simply performed in obedience to stimuli of various kinds, motion following stimulus as inevitably as effect succeeds cause in the non-living world. The evolutionists attempt to explain design in structure, through the operation of the Darwinian law of the "survival of the fittest," showing that only those beings whose organization displays that adaptation to use in relation to its surroundings, which is termed "design,"

¹ A lecture delivered before the Franklin Institute, Philadelphia, February, 1874.

could possibly continue to exist. It is justly urged against this reasoning, that it attempts no explanation of the *origin* of such structures. Another school of evolutionists have therefore maintained that such structures are due to the effect of effort, *i. e.* stimulus or use, exerted by the living being on its own body, and that the design thus displayed, is an expression of the intelligence at some time possessed by itself.

So long as there is any probability of the last explanation proving valid, it will be important to examine into the questions of metaphysics which it necessarily involves. The investigation is indeed but the necessary projection of those which have resulted in satisfying the great majority of biologists of the reality of evolution, or of the fact of the descent of existing living beings, species by species, order by order, and class by class, from others which have preceded them in time. Clearly, then, we enter the question by considering the nature of movements of plants and animals in relation to the stimuli which are supposed to call them forth.

2. THE UNCONSCIOUS.

A true study of metaphysics necessarily has for its objects plants, animals, idiots and infants, as well as healthy men; nevertheless, necessity compels us, in discussing the question, to dwell on our own experiences as a *sine qua non*. Now experience, in a general sense, includes not only the memory of our conscious acts, but a knowledge of our unconscious ones, and to the latter especial attention must be directed, since they are most readily overlooked. The marvelous character of memory cannot be too much considered. Of the millions of impressions which the mind has received and registered, in the course of a lifetime, but one can be clearly present in consciousness at one time. The remaining millions are not lost; they are stored, each in its appropriate place, to be sprung into consciousness when the appropriate suggestion presents. How much more vast, from this point of view, is the unconscious mind than the conscious! But the phenomenon is not confined to memory. Who that has ever attempted the digestion of a subject which includes a mass of details, is not acquainted with the unconscious activity of the mind in classification? How frequently a question involving

many parts, is, on the first reception of the constituent facts, all confusion; but in time displays its symmetry clearly to the consciousness, every part in its proper place, and that with little or no further attention having been devoted to it. It is indeed probable that the every-day process of inductive reasoning is conducted in unconsciousness on the part of the subject. Induction consists in the generalization of some quality as common to a great number of objects of memory; a greater or smaller number of other qualities being neglected in the process. When this act is performed voluntarily, one or many qualities are successively passed in review before the mind, each one being in its turn impressed on the perceptive centres—so long as it is the object of inquiry, the others being excluded from consciousness for the time being. It is simply a process of classification, and when performed in consciousness, constitutes "experiment." But when no generality is anticipated and its existence is unknown, it often happens that such generalization becomes known or rises into consciousness, without the bestowal of effort in classification of the objects to which it refers. The impressions consciously received have been arranged out of consciousness, and when revived into consciousness display an order which was not previously known to exist. It is in the latter way that the "practical man" "finds out" the rules by which, as by an instinct, he regulates his intercourse with the world. He often cannot explain the reasons of their truth, nor does he know how he came by them, being generally content to call them the results of "experience." In some persons they are so feebly expressed in consciousness as to be called "feelings;" and many experiences or repetitions are sometimes necessary to impress on us the importance of these mental products before we are willing to follow them in action. "Strength of mind" is an expression applied to a high degree of this unconscious reasoning; expressing the extent of ground the process covers continuously, as well as the exactitude of its results. The experimental investigator, on the other hand, performs this work deliberately, and is acquainted with the processes; he is, therefore, at first more confident of his results. And we observe here in passing, that a rule once discovered, is as readily retained in the cells of the unconscious, as is the memory of a simple object or event.

Another form of unconscious cerebration is seen in deductive reasoning, which employs rules already discovered in application to new cases. Calculating prodigies are a case in point. It is well known that those persons who have from time to time appeared, possessed of the power of calculating with enormous numbers with marvelous rapidity, have never been able to explain the process by which they reach their conclusion, nor are they conscious of going through the steps involved in the calculation they perform; and it has been said that great calculators have rarely been great mathematicians.

The explanation of these phenomena is not far to seek. In simpler forms it is presented to us every day. Thus it is an easy matter to read with but little consciousness of the process, and no recollection of the subject matter of what is read. Most manual operations can be performed while the consciousness is occupied with other objects.

If these be facts of human experience, how much more likely are they to be true of animals? If man be unconscious of the process during the performance of some of his most complex acts, how much more probable is it that animals are so while pursuing the narrower circle of their simpler ones? Yet animals are not devoid of consciousness; indeed, it is scarcely credible that any one should deny to them consciousness, after experience in their education.

But let these automatic acts be ever so simple or complex, it is claimed that they could not have *originated* out of consciousness. Whatever we call voluntary acts in ourselves, undoubtedly have to be *learned*. The acquisition of the primary act of walking is accomplished by a slow and painful education; while knitting and other manual exercises necessarily require preliminary training, some of shorter, others of longer, duration. This is true of such voluntary acts as we perform most readily automatically, and such as might be supposed to be most probably acquired by hereditary transmission, as for instance speaking. The case is the same with animals. All those services which are useful to us, or tricks which amuse us, are acquired at the expense of training, which involves a system of stimuli, consisting of rewards and punishments, as in our own species. Is there any reason to sup-

pose that those habits which we observe them to possess in a state of nature have had a different origin?

It is incontrovertible that a regular succession of muscular movements may be committed to memory as certainly as a color or a shape, and that a change of brain substance, such as causes the retention of the simple impression, is also involved in the retention of the complex. When this machinery is completed, through the repetition of conscious stimulus, it works thenceforth without necessary intervention of consciousness. The consciousness may then be engaged in fresh acquisitions, accomplishing new organizations, thus accumulating a store of powers. Once organized, these powers are at the disposal of their possessor, yet the organized machine will at some time undergo change, if not more or less frequently used. Without use it may indeed finally disappear, showing that the capacity for organization is identical with a facility of disorganization.

3. THE ORIGIN OF AUTOMATIC MOVEMENTS.

Is any habit originated in unconsciousness? Those who affirm this proposition, point to the movements of plants in the extension of their tendrils, and the closing of some sensitive leaves; the timely expansion of the down of the *Aesclepias* seed, and the insect-catching habits of *Drosera* and *Dionaea*. No one surely attributes consciousness to these. And there are many similar movements in animals which are as thoroughly unconsciously performed as are those of plants, from the first moment of the animal's birth; as for instance, the involuntary activities of the circulatory and digestive systems, etc. Did these originate in consciousness or unconsciousness? The answer to this question constitutes the key to the mysteries of evolution, and around it the battle of the evolutionists of the coming years will be fought.

It may be asserted at the outset that those habits whose origin we have had the opportunity of observing in ourselves and in other animals, were certainly acquired in consciousness, and that we do not believe that they could have originated out of it. The stimuli to action are divided into the two general classes of pleasures and pains, and each stimulus is potent in proportion to the intensity with which it is consciously apprehended. If many and complex acts may be performed automatically, through the organization of special machinery in the gray matter of the brain,

it is altogether reasonable that similar powers should be found to be conferred on gray nervous tissues in parts of the body which are no longer seats of consciousness. It is well known that the spinal cord of the headless frog responds to stimuli in the vigorous muscular contractions of the limbs which follow the application of acid to the skin. So the ganglionic centres of organic-life respond to their appropriate excitants; the various glands of the digestive system discharging their contents into the ingesta at the proper moment, consciousness having no share in the proceeding. These phenomena are more readily explained on the theory of endowment, than on that of physical movements; since by means of the former the evident design in the movements is accounted for, while the latter gives us no clue to this characteristic feature of these and all other vital processes.

The lowest form of consciousness is common sensibility; and judging by the resemblance between our own experience and that of the higher animals, the lowest of animals also are not devoid of this quality. The structureless jelly of Rhizopods, such as Amoebas, Gromias, etc., evidently selects its food with regard to its nutritious qualities, in most instances preferring diatoms and desmids to sand and other innutritious substances. Its acquisitions in knowledge of articles of food can only be accounted for on the hypothesis of original, pleasurable or painful, consciousness of the effects of external and internal contact with these substances, and retention of the impression in unconsciousness. The impression reviving on the recurring of a similar contact, the substance is accepted or rejected as the former sensations were pleasurable or painful. And this is not incredible, if, as the researches indicate, the structure of the protoplasm of these creatures is of the same type as that of the bioplastic bodies of the gray tissue of the brain.

In accordance with this view, the automatic "involuntary" movements of the heart, intestines, reproductive systems, etc., were organized in successive states of consciousness, which conferred rhythmic movements, whose results varied with the machinery already existing and the material at hand for use. It is not inconceivable that circulation may have been established by the suffering produced by an overloaded stomach demanding distribution of its contents. The structure of the Cœlenterata offers

the structural conditions of such a process. A want of propulsive power in a stomach or body sac occupied with its own functions, would lead to a painful clogging of the flow of its products, and the "voluntary" contractility of the body or tube wall being thus stimulated, would at some point originate the pulsation necessary to relieve the tension. Thus might have originated the "contractile vesicle" of some protozoa, or contractile tube of some higher animals; its ultimate product being the mammalian heart. So with reproduction. Perhaps an excess of assimilation in well-fed individuals of the first animals, led to the discovery that self-division constituted a relief from the oppression of too great bulk. With the increasing specialization of form, this process would become necessarily localized in the body, and growth would repeat such resulting structure in descent, as readily as any of the other structural peculiarities. No function bears the mark of conscious origin more than this one, as consciousness is still one of the conditions of its performance. While less completely "voluntary" than muscular action, it is more dependent on stimulus for its initial movements, and does not in these display the unconscious automatism characteristic of the muscular acts of many other functions.

Bearing in mind the property of protoplasm to organize machinery which shall work automatically in the absence of consciousness, we can glance at the succession of vegetable forms. The active movements of the primary stages of the Algae are well-known. After swimming actively through the water, they settle down, take root, and assume the role of plants. The *Aethalium*, swimming with the movements of a Rhizopod, has been known to take food before establishing itself on the damp piles of the tan-bark, where it speedily becomes a low form of fungus. The approximation of the lower forms of plants to animals is notorious. The fungi, it is said, are the only terrestrial plants which live like animals on organic matter, appropriating the humus of their rich nidus in a state of solution. Now the paleontology of animals has absolutely established the fact, that the predecessors of all characteristic or specialized types have been unspecialized or generalized types, "neither one thing nor another." It may then be regarded as almost certain, that the ancestors of the present higher types of plants, were more animal-like than they; that the

forms displaying automatic movements were more numerous, and the difficulty of deciding on the vegetable or animal nature of a living organism, greater than it is now. Hence it may be concluded that "animal" consciousness has from time to time organized its machinery and then disappeared forever, leaving as results the permanent form of life which we call vegetable. But it is not to be supposed that all changes of structure cease with the departure of consciousness. Given spontaneous movement (*i. e.* growth) and surrounding conditions, and the resultant product must be structures adapted to their surroundings, just as the plastic clay is fitted to its mould. And this is essentially the distinguishing character of vegetable teleology as compared with animal. In the average plant we see adaptation to the conditions of unconscious nutrition; in the animal, adaptation to conditions of conscious contact with the world under a great variety of conditions.

4. GROWTH FORCE.

The active processes of living beings are examples of conversion of physical forces, only differing from the conversions observed to take place in inorganic bodies, in the nature of the machinery which exhibits them. The construction of this machinery, as in its use when finished, involves a conversion of force, the resultant consisting of the attraction of nutritious material in definite new directions. This determinate attraction has been regarded as a distinct force, to which the name of bathmic, or growth force, has been applied. It differs from all the physical forces in this, that while they are only exerted inversely as the square of the distance, this one is in addition most excessive where pleasure has been experienced and weakest where pain has left its deepest traces. In other words, its movements express *design*, the essential condition of which is *consciousness*. It is thus evident that it differs utterly from all other forces, although a retrograde metamorphosis of matter is as necessary for its production, as for that of any of the other forces. Now, although the evidences that stimulated consciousness, or if you choose, mind, can modify structure, are, as matter of observation, not very satisfactory; yet, since the essential peculiarity of growth force is its instant attendance on the needs of consciousness, it is a permissible hypothesis that its activity is immediately due to consciousness. This activity is located in bioplasts which do not exhibit consciousness; whether it coëx-

ists with consciousness in brain bioplasts is unknown. The successive exhibitions of this force from the lowest to the highest of living beings, have ever been additions to the executive machinery of a more and more specialized consciousness. Thus it is that its results in structure have ever become more and more complex, that is, composed of an ever-increasing number of parts in some region of the organism. Hence another point of distinction from other forces exists, which has been pointed out in a previous paper. It is quite evident that the higher forms of life are the result of continued super-addition of one result of growth force on another, some examples of subtraction or simplification of parts being generally accompanied by a great preponderance of additions. This is evidence of the accumulation of the property of producing this kind of force, since each successive addition imposes on the growing animal a greater number of successive stages before the process reaches its termination, maturity. This involves the belief that the property of exhibiting frequent "repetitions" of growth activity exists in a higher degree in the reproductive bioplasm of the more complex animals, than in that of the lower ones. This is in accordance with the fact of the regular increase in relative complexity and bulk of the nervous system, which accompanies complexity of structure in other respects in the ascending scale of animals. Thus this force differs from all others, as remarked by Prof. Hartshorne, in that its expenditure ultimately increases the amount of its production, because it constructs machinery which feeds its especial organs more and more successfully. Although expended by becoming energetic, its energy produces the means of its own increase. Unlike the physical forces whose expenditure renders matter ever more inert, growth force when expended adds material which as a profitable addition, increases the power of the central machine from which the force emanates, by furnishing an increased supply of food.²

Thus it is evident that growth force is not concentric nor polar

² It is incorrect to say that growth force is "potential" in highly organized types, as it is undoubtedly expended in the movement of nutritive pabulum to a given locality. The maintenance of it in that locality is due to ordinary molecular cohesion, which can only be set free by greater molecular consolidation.

in its activity, as are the physical forces, and that its determinations are antagonistic to these. Its existence in the earth has been a succession of conquests over polar force, and if preceding assumptions be true, the gradual progress presented by animals in abandoning the symmetrical forms exhibited by the lower types, has doubtless been due to the constantly increasing amount of consciousness.

5. THE DOCTRINE OF THE UNSPECIALIZED.

It is, however, evident that the directing power of consciousness is limited by the nature of the matter with which it has to deal. There are certain fundamental necessities to which it must conform. No one supposes that any degree of power can make twice two equal to six, cause two solid substances to occupy the same space at the same time, or make an absolutely solid substance out of incompressible atoms of different forms. These involve the absurdity that something can be made out of nothing, or nothing out of something. From the present conduct of the inorganic world, it would appear to possess properties which render consciousness impossible to it. This is doubtless due to the relations existing between the atoms or molecules of which its various species consist. The movements it displays are polar. The colloid molecular state is, so far as this planet is concerned, the only one which we know to be capable of consciousness, and then only while in a state of active transformation. As we have seen, when protoplasm is once organized and working automatically, consciousness need not be present; and when this is absent, the rate of transformation, that is, the amount of food consumed is greatly lessened. The excess of expenditure during conscious activity over that necessary to unconscious activity, is well known. It is thus evident that organization renders consciousness unnecessary, so long as external conditions are unchanged, and most probably a degree of fixity may be attained which renders consciousness impossible. The history of the evolution of animal types is apparently an illustration of this truth. The relations of the divisions of the animal kingdom are those of the limbs, branches and trunk of a tree. Although the termini of the branches are successively nearer the root or starting point, as we proceed from the apex downwards or backwards, yet the connec-

tion is not from end to end of these. To find this we pass down the limb to its junction with the trunk, and trace the branches from the axis outwards. Thus with the branches of the animal kingdom. Although the divisions vertebrata, mollusca, echinodermata, etc., stand in an undoubted relation of succession to each other, there is no connection between the highest representative of one, and the lowest of another. It is the lower or less specialized forms of each which exhibit the relationship. Thus, among the articulates, the low group of the worms gives us connection with the mollusca above by *Brachiopoda*, and the echinoderms connect themselves with the *Vermes* by the less specialized *Holothurida*. It seems highly probable also that the point of contact of the *Vertebrata* with these is by one of the lowest divisions, formerly regarded as molluscan, viz: the *Ascidia*. The same principle holds good within the great divisions. The most specialized orders of mammalia are the *Artiodactyla*, higher *Perissodactyla*, the *Carnivora*, *Quadrumania*, and perhaps *Cetacea*; but the higher of these have not been derived from the lower. Modern investigations show that several of them have been derived from a common type of mammals of the Eocene period, which is intimately connected with their lower forms, while wanting in the features which give them their special characters. These two illustrations serve to explain the universal law of zoölogical affinity, and therefore of evolution.

The conclusion derived from a survey of this field is, that structure, like habit, when once established, is closely adhered to, and that the movement of growth force once determined or organized becomes automatic, *i. e.* independent of consciousness. Therefore a type which reproduces itself automatically becomes after a time so established as to be incapable of radical change in consequence of a molecular fixity which precludes it. Nevertheless susceptibility to influences of conscious stimuli may remain in some portions of the organism, and thus subordinate modifications of structure have their origin. When conditions of life change, as they often have done during geologic time, those changes of structure which are possible, take place under the stimulus of roused consciousness. But if the changes be radical, affecting the foundation processes of vital economy, the specialized forms must undoubtedly perish, and the life of the succeeding

time be derived from forms of less pronounced character. The adaptability of generalized types, as to habits, and the absence of mechanical peculiarities in their structure, explain fully the cause of their standing in ancestral relation to all the typical faunae of the earth.

Nowhere is this truth more remarkably illustrated than in the case of man, the predominant mammal of the present period. From the generalized mammalian fauna of the Eocene, the Carnivora developed a highly organized apparatus for the destruction of life and appropriation of living beings as food. The cloven-footed and odd-toed hoofed orders³ are the result of constantly increasing growth of the mechanical appliances for rapid motion over the ground; the former superadding exceptional powers of assimilation of innutritious food. The proboscidians developed huge bulk and an extraordinary prehensile organ. The *Quadruman*a produced none of these things. In respect to speed of limb and powers of digestion, both in function and structure, they remain nearly in the generalized condition from which the other orders of mammals have risen. The limbs and teeth of man retain the characters of the primitive type. Yet but two species of proboscidians remain; the Perissodactyle multitudes are represented by but a few vanishing species. The day of the *Carnivora* has passed forever, and the remaining Artiodactyle herds exist but by the permission of their master, man. But past geologic time reveals no such abundance of true *Quadruman*a as the present period displays. These animals were evidently unable to compete with those of other types in seizing on the opportunities of living. They were excluded from the chase by the more sanguinary ancestors of the carnivora, and from the field by the multiplying herds of the swifter or more resistant hoofed animals. They possessed neither bulk, nor speed, nor cruelty to serve them in the struggle for existence. So they were doubtless compelled to assume an arboreal life, which required little or no modification of the limbs for its maintenance, although the ultimate production of the grasping thumb from their primitive squirrel-like leg, may be traced to this mode of life. The acquisition of a hand must be regarded as the first step in that marvelous accession of experiences which is the condition of mental development.

³Represented by the ox and the horse.

And this latter growth has taken the place of all other means of conquering a position in the world of life, so that man has even retrograded in the efficiency of bodily powers. He has lost the prehensile quality of the hind feet, and the special usefulness of his canine teeth. But the competition among men continues to be such as to render it in the highest degree improbable that he will, as a species, lose the position gained, or suffer any prolonged diminution of the power of intelligence.

Now it is obvious that the more restricted the conditions of the life of a given animal type, the more sensitive it will be to changes. Hence it is that the risks to the existence of *Carnivora*, *Artiodactyla*, *Proboscidea*, etc., are much greater than to the omnivorous, all adaptive order of *Quadrupedia*. The same is true of mind. The greater the proportion of unconscious automatism of habits, the less the power of adaptation; and this must be the condition of all animals, whose structure is so specialized as to place them beyond reach of competition, or to cut them off from a wide range of experiences. The greater the degree of consciousness of stimulus, the greater will be the degree of adaptability to new relations, and to such constant rousing the unspecialized mind is always open. If without strong natural weapons, vigilance is the price of existence; if not confined by organization to a peculiar kind of food, ceaseless investigation is stimulated. And these are the mental peculiarities which distinguish the monkeys among all the Mammalia.

The reverse of this picture may now be described, as has been done by Prof. Vogt. It is well known that the young of many parasitic animals are free and active, and discover during migration the localities to which they afterwards attach themselves for life. During the early stages they present the characteristic marks of their order and class, and in some instances the males, remaining free, continue to do so. Such are the *Entoconcha mirabilis*, the *Sacculinae* and the *Trematoda*; the first a mollusc, the second a cirrhiped crustacean, the third a worm. On their becoming attached to their host a successive obliteration of their distinctive characters takes place, so that they become so simplified as to be no longer referrible to their proper class, but susceptible, as Prof. Vogt remarks, of being united in a single division. A similar process is observed in the structural degeneration of the Lernean

parasites, which are at first free, but afterwards become parasitic on fishes. There is in this instance a coincidence between degeneracy of structure, and loss of compulsory activity: not only is every function of their sluggish lives automatically performed, but consciousness itself must experience little stimulus.

From what has preceded, it is evident that automatism is at once the product and the antagonist of evolution, and that it is represented in structure by specialization. It appears also that consciousness is the condition of the inauguration of new habits, and this is only possible to structures which are not already too far specialized. This is doubtless true, whether osseous and muscular tissue be concerned in evolution, or whether it be nervous and brain tissue. Hence in the highest form of development, that of brain mechanism, automatism is the enemy, and consciousness the condition of progress. As a product of development, automatism is the condition of stationary existence, and constitutes its effective machinery, but every additional step requires the presence of consciousness. This may be expressed in the every-day language of human affairs, by saying that routine and progress are the opposite poles of social economy.

6. THE ORIGIN OF CONSCIOUSNESS.

This question has not yet been touched upon, nor is it necessary to give it prolonged attention at present. Consciousness is in itself inscrutable to us, and the contrast which it presents to physical and vital forces is the great fact of life. It is obvious enough that certain molecular conditions are essential to its appearance; drugs intensify or obscure it; concussions and lesions destroy it. It will doubtless become possible to exhibit a parallel scale of relations between stimuli on the one hand, and the degrees of consciousness on the other. Yet for all this it will be impossible to express self-knowledge in terms of force. The question as to whether the product of the force conversion involved is the consciousness itself, or only a condition of consciousness, may receive light from the following consideration.

Nowhere does "the doctrine of the unspecialized" receive greater warrant than in the constitution of protoplasm. Modern chemistry refers compound substances to four classes, each of which is characterized by a special formula of combina-

tion. These are called the hydrochloric acid type, the water gas type, the ammonia type, and the marsh gas type. These series are defined by the volumetric relations of their component simple substances: thus in the first, a single volume unites with an equal volume of hydrogen; in the second, two volumes unite with a single volume of hydrogen; in the third, three, and in the fourth, four volumes unite with the single volume of hydrogen. The weight ratios of these compounds are expressed by the following formulas—chlorine, oxygen, nitrogen and carbon being selected as typical of their respective classes: HCl , H_2O , H_3N and H_4C . Now it is an interesting fact that protoplasm is composed of definite proportions of four simple substances, each one representing one of the classes above named, or in other words, the capacity for proportional molecular combination which characterizes them. The formula $\text{C}_{24}\text{N}_8\text{O H}_{17}$ expresses the constitution of this remarkable substance. Now although the significance of these combining numbers is unknown, there is a conceivable connection between the characteristic peculiarities of protoplasm and the nature of the substances which compose it. It is probable that these, when in combination with each other, exert a mutually antagonistic control over each other's especial and powerful tendencies to form stable, and hence dead, compounds. It is therefore reasonable that the terms "unspecialized" or "undecided" should be applicable to the molecular condition of protoplasm, and in so far it is a suitable nidus for higher molecular organization, and a capacity for higher forms of force conversion than any other known substance. If also in inorganic types, as in the organic, the generalized have preceded the specialized in the order of evolution, we are directed to a primitive condition of matter which presented the essentially unspecialized condition of protoplasm, without some of its physical features. We are not necessarily bound to the hypothesis that protoplasm is the only substance capable of supporting consciousness, but to the opposite view, that the probabilities are in favor of other and unspecialized, but unknown forms of matter possessing this capacity.

Consciousness constitutes then the only apparently initial point of motion with which we are acquainted. If so, we are at liberty to search for the origin of the physical forces in consciousness, as well

as the vital; their present unconscious condition being possibly due, as in the case of the vital, to automatism; the automatism being the expression of the atomic type of the substance exhibiting it. And, doubtless, the simple quantitative relations of the lowest types of forces are related to correspondingly simple geometrical conditions of matter, both representing the simplest grade of automatic action and machinery. We may also suppose that all of these primary conditions were necessary to the production of protoplasm, the only form of matter known to us in which consciousness can persist.

In conclusion, it is obvious that the metastatic condition of protoplasm necessary to the *persistence of consciousness* could not be supported without a constant source of supply by assimilation. Hence it would appear that the preliminary creation of dead and unconscious substances and organisms were a necessary antecedent to the accomplishment of this end; at least under circumstances of temperature under which living beings or protoplasm exist on this planet. Without the unconscious inorganic and organic products of nature, consciousness could not exist on the earth for a day. No animal can maintain consciousness without food; and that food must be, in the main, protoplasm. Protoplasm is manufactured from inorganic matter by the (supposed) unconscious protoplasm of the plant. What form of matter originally gave origin to protoplasm is yet unknown, but it is obvious that the ordinary physical forces must have existed as conditions of its creation, since now they are absolutely necessary to its persistence. Hence we may view the succession of automatic activities, somewhat in the light of the fagots used by the elephant to lift itself from the well into which it had fallen. One placed upon another finally raised the footing to an elevation which enabled the animal to obtain its freedom.

Consciousness is the essential, and at the same time, the only condition of personality; so that in this view of the case we are led to a primitive personality, although not to what we call life. And the reason why this personality is to us so obscure a conception, is probably to be found in the fact that it as well as ourselves is conditioned in its relations to matter, by necessary laws of "mathematical" truth.

E. D. COPE.

EDUCATIONAL REFORMS AND REFORMERS.

I.—THE BRITISH SYSTEM OF EDUCATION, BY JOSEPH LANCASTER.

[Education, or the conformation of the real in humanity to its ideal, is a theme of inexhaustible interest, even to the most prosaic age. Not only do theories of education sunder party from party, but they are, in the last resort, the only ground of division among thoughtful men. One party holds to the omnipotence of educational methods, as embodied in schools and institutions, and is radical, or socialistic it may be. Another believes more profoundly in the force of the human inheritance of character and habit from past generations, and is conservative. Or one party holds that within the range of human life and its resources, lie all the means for the perfection of mankind, and it is positivist. Another regards the self-elevation of the race as analogous to the process of getting into a basket and lifting one's self up by the handles; it looks for a will and an intelligence outside the race to call forth the will and the intelligence of the race; it is therefore theistic—religious, if you will.

The story of educational reformers is of perpetual interest, not only because it includes many of the greatest men of the past—Charlemagne, Alfred, Bacon, Luther, Loyola, Milton, Comenius, Locke, Kant, Lessing, and the like—but because we find ourselves in them. We cannot enter into life with any sincere purpose to better the world, and not come upon this question among the very first: How shall the child be trained to true manhood, and the man to even truer manhood? How shall we infuse organizing intellect and will into the huge, inert, inorganic mass, that adds to the bulk rather than the life of humanity? All political parties, all churches, all lovers of men, are busied with these problems, are trying with more or less success to answer them. All literature is but the primer and text-book of a larger school, and whoso has aught in him that he thinks worth utterance, sits in the seat of the teacher.

The subject of the first of these sketches, furnished us by an obliging contributor, depicts the man who first brought the educational problem as regards the illiterate classes fairly before the

English people. The English Reformation, unlike the German and the Scotch, originated no movement for the extension of education to the lower classes. Down to our own times no sufficient steps had been taken in that direction by the English people. But at the beginning of this century, the interest in the subject that was awakened by the French Revolution found a representative and an utterance in a man of some weight and worth, if not of the first order—Joseph Lancaster. Never was there a more thorough Englishman in the intensely practical drift of his thinking. To him the question is not chiefly “Which of all the manifold subjects within the range of human knowledge is best worth the teaching, is most likely to call into vigorous play the powers of mind and conscience?” but these rather: “How shall we organize the mechanism of the school-room out of the existing human material, so that a fair proportion of teachers shall be secured for this great untaught mass?” “How shall the order of the school be so provided and secured as that the discipline of the school shall mould the characters of these pupils, and make them fit for their place in society?” Both questions are exceedingly English, and both are very ably met by Mr. Lancaster in his well named “British System,” whose intensely national character was no doubt the chief secret of the charm it exercised over many of his countrymen.

The British School Society formed on this basis, we believe, still exists. As late as 1848 we hear of an English Inspector complaining of the schools under its charge as unsatisfactory. Their principal distinction from other schools—apart from the monitorial system—is their very free use of the Bible as a text-book, to the exclusion of all sectarian works and comments. The Bible—as Prof. Huxley says—is a very valuable educational manual; but the bare use of its letter, with no attempt to get at the spirit and enforce the sense, cannot be fruitful of any great results. As it is used, for instance, in our own public schools, the original Greek and Hebrew might as well be read as the English translation. And beyond this bare literal use of the Bible—another British notion, transplanted however to our side of the Atlantic—the British and Foreign School Society does not seem to have gone.—ED.]

The following sketch of the Lancaster School System is taken from a small octavo of 130 pages, re-printed in Washington in 1812, entitled "The British System of Education, by Joseph Lancaster"

The author's claim to the improvements and inventions of his system is thus given: "This plan cannot be found in any other work unless copied or pirated. Of all its ideas, there is but one borrowed, and that is from the Madras or Hindoo mode of education, printing in sand, and even that is materially improved. It only is applied to the A B C class."

The want of lucid arrangement in his presentation of the plan as a whole, makes it necessary to gather, from different portions of the book, the necessary statements relating to each department of the system. Lancaster must have been a better lecturer than writer, judging from the wonderful success of his lectures in so deeply impressing the public mind with the value of his plan of education as to lead to its adoption in so many towns and villages in Great Britain, and its introduction into this country.

The object presented, in the beginning, was a humanitarian, as well as an educational system. The hitherto neglected children of the lower classes were to be gathered and saved from pauperism and crime by being taught reading, writing, arithmetic and the first principles of Christianity, and thus trained to become useful members of society. The system invented by Mr. Lancaster, through which this desirable result was to be produced, he described as simple in its organization, economical and effective in its action, and suited to all classes of children.

A school of over or less than a hundred boys of different ages and capacities, with or without previous training, moral or educational, are to be brought together under one governor, who may also be the sole teacher, if the number of scholars does not exceed thirty. When the school amounts to more—"he must either do the children injustice or take one assistant or more, as the numbers increase, requiring three to one hundred and forty scholars. The economy of education depends on an *efficient* substitute being found for paid assistants. In other schools, as scholars increase, the attendant expenses rise in proportion. But do away with the expense of under-teachers as scholars increase, and if one master

only is wanted, one salary only is required. But this depends upon the boys being qualified to act as substitutes for paid assistants, which Lancaster says, "only can be done by simplifying the system of order and tuition, whereby both may be equal to the meanest capacity, and may consequently be delegated to any pupil in the school. This has been done by the author, and never was done till he did it. The consequence is, that as scholars increase, the expense for each individual decreases, leaving one master competent to teach many instead of few."²

The economy of the system is fully explained on this point, and he adds another feature in saving expense, "superseding in a great measure the use of books in tuition," while it doubles the actual improvement of the children, by the use of slates for copying, and cards suspended on the walls as lessons to be copied. Its effectiveness in promoting order, prompt obedience to commands, and in keeping every scholar busily engaged in the lessons or exercises—the simplicity of its organization by adhering strictly to a few important rules and arrangements—these were placed before the hearers so convincingly, as to inspire them with as strong faith in his system as was held by himself. The encouragement given by men of all classes—statesmen, philanthropists, noblemen, professors and clergymen, as stated in the work—would seem to have been exaggerated by Mr. Lancaster beyond probability.

A testimony however is given in the "Life of Mackintosh," proving the confidence that he placed in the theory and practical application of Lancaster's views. In one of his letters dated Bombay, July 25th, 1807, he writes: "Next to a parliamentary situation, I should prefer that of being the lawgiver of Botany Bay. If I could rescue at least the children of the convicts from brutality and barbarism by education, I should consider it an object to which I ought to devote the greater part of the remainder of my life. If I were appointed Governor or Chief Justice, with assurance of support from home, with a sufficient military force, with a store of schoolmasters from Lancaster, with some good Irish priests for their countrymen and good Methodists for the rest, I should most joyfully endeavor to introduce law and morality into that wretched country, and give it the fitting constitution for a

²Quoted in Lancaster's own words.

penal colony which was to grow into a great and prosperous community."

The estimate given by Macaulay of the value placed upon the opinions of Sir James Mackintosh, is given in an article written for the *Edinburgh Review*: "His judgments on men, on sects and books, had been often and carefully tested and weighed. He never yielded to the impulse of the moment, and his opinions were the ripe fruit of study and meditation." These characteristics give additional weight to the testimony, and on reading extracts from the reports of the committees in different localities in England, on what had been accomplished by the system, there is sufficient evidence that Lancaster had brought out new ideas on education that had proved valuable and important wherever they were fully carried out. Even at the present day a writer on "Compulsory Education," in the *New York Tribune*, refers to "Lancaster as the first great educator to discover and apply certain universal principles to the aggregate school, that in his day were simply discoveries."

The essential distinction of Lancaster's system was the elementary school. It was limited to reading, writing, arithmetic, and the first principles of the Christian religion. The last subject was incidentally referred to, but the directions given how to teach the three previous branches of education are so thorough and practical as to warrant success in every case, save those where natural defects or mental idiosyncrasy prevented their application.

The inventor aimed at nothing beyond these, but these were to be perfected as far as possible by careful initiation and practice. The superficial training in the primary lessons is a frequent complaint in the high schools or colleges, as nullifying the opportunities of a wider range of studies and a higher culture.

A thorough knowledge of the elementary branches alone may prove a starting-point to a boy who presses onward through a course of self-culture until he rises, as many have done before him, to a high and honorable position; but without this advantage, college education may be a failure.

In tracing the formation of the Lancasterian system from the beginning to its completion, it appears to be a specimen of the perfection of machinery. The "inventor," as he calls himself, must have arranged every part of his model so as to move in har-

monious combination, without the least danger of friction in any of its parts.

It would seem as though the whole machinery of the school was to be moved by the one-man power; but Mr. Lancaster ascribes it to the system itself. "The authority is vested in the system, more than the person," is the statement given in his work.

On reviewing the whole plan, the most striking impression is the wonderful forethought exercised in every arrangement, to prevent the violation of the rules laid down as indispensable. Even the school-room itself, in its dimensions, its ranges of separate desks grouped in divisions for the different classes, the places assigned for everything, and everything to be in its right place, were all favorable to order. The careful grading of the classes as to proficiency; the whole occupied at once with their respective lessons dictated by their monitors, writing them on their slates—no idling or talking allowed, but every one attending to his own work in his own place—the changes of occupation were all important to give variety and prevent weariness by presenting different forms of mental exercise. In calling the classes to assemble each in their own semi-circles, in front of the suspended cards on the wall, where the separate monitors pointed to the lessons to be simultaneously read, or the sums to be counted up and answered—this roused to renewed mental action. With their attention kept fixed on the lessons before them, and their minds wide awake by being interested, it is natural that the result should be the formation of industrious habits and a love of order.

In one of the London Reports of the Lancaster Society to the patrons of the institution, it was stated that out of six thousand children of the lower classes educated there, there was no instance occurred of any one of them being called before a court of justice on a criminal accusation. This was a valuable comment on the early formation of habits of order and industry, with a thorough preparation for the right use of the educational tools of reading, writing and arithmetic, placed in their hands to enable them to become the builders of their future as good citizens and useful men.

In theory the system appears an impossibility, viewing children as they are in their varied individuality; yet the experiment has been acknowledged a practicability by those who knew it to be

an established success, notwithstanding these admitted differences in children.

There seems, however, something painfully mechanical in the system when we think of the living, sentient beings, full of the sportiveness of childhood, with its tendency to outbursts of individuality, to be placed under its machinery. It is only in the family, or, as a writer says, in "the natural plan of an exclusive instructor to every child," that individualism can find expression or become a study, so that the teacher can adapt the specific course of training required. There only can liberty be allowed to a child to seek knowledge for itself and in its own way, in the books where it can be found, or in collecting from the hills and woods the specimens he has seen described and illustrated.

The same writer quoted above states that in this day "the schools of society are necessarily gregarious." If, then, children must be gathered in masses, the arrangements of the Lancasterian school for the promotion of order, government and regularity in the exercises of the school room, and industrious application to the graded lessons adapted to the progressive advancement of the scholars, are well worth attention. We hear of no subsequent attempt to restore the system that Lancaster kept for so many years in successful operation. The loss of confidence in his character as a man, in later years, had no effect in lessening the confidence in his educational plan of those who had seen it tested and approved. Its intrinsic value is the same, and may, at least, be worth a trial as an experiment.

As some persons may be interested in the course pursued by Lancaster as the founder of his system of schools, the following special directions are copied from his work, and mostly in his own words. Beginning at the school room as the foundation of the plan, he thus describes it:

THE SCHOOL ROOM.

The best form for a school room is a long square or parallelogram.

All the desks should front the head of the school, that the master may have a good view of each boy at once; the desks should all be single desks, and every boy set with his face toward the head of the school. Room should be left between each desk

for a passage for the boys, that the scholars in one desk may go out without disturbing those in another. It is desirable that the desks and forms should be substantial and firmly fixed to the floor. The ends or corners of the desks and forms should be rounded off, as the boys, when going quickly in or out, are apt to hurt themselves by running against them. Passages should be left at the bottom and on one side of the school, or on both sides, when space allows. Children confined in a small school room can no more be expected to be in order than soldiers can perform their exercise without a sufficient parade-ground.

At the head of the school room there should be an elevated platform for the master's desk, as a convenient place to overlook the school; and whenever the floor can be placed on an inclined plane, it should be made so. The ventilation of school rooms should always be provided for, and they should be made as much as possible open every way to a free circulation of air. They should also be warmed by flues passing under the floor, so that there will be no necessity for the children to leave their seats to go to the stove.

Another plan for promoting order on entering the school. The boys sling their hats over their shoulders, as a soldier would sling his knapsack. Before leaving, the order to "unsling hats" is done by a simultaneous motion on receiving the command.

An important maxim is taught and observed, and never allowed to be departed from: A place for everything and everything in its place.

THE RULE BY WHICH CLASSES ARE FORMED.

On beginning a new school, when the children were gathered together, they were first examined separately as to their previous acquirements, and then classed accordingly. If only four or six were found nearly equal, they were placed together. The class may consist of any number, without limitation to any particular numbers.

GRADATION OF CLASSES.

The first or the lowest class of scholars are those who are yet unacquainted with the alphabet. This may consist of 10, 20, 100, or any number who do not know how to distinguish all their letters at first sight. If only twenty, one monitor can govern and

teach them—double the number will require two teachers. In this and every other class described in the plan and arrangement, the monitor has but one plain duty *to do*, and the scholars one also, to learn. This simplicity of system defines at once the province of each monitor in tuition.

The method of teaching is as follows: a bench is fixed on the floor for the boys to sit on; another bench, a foot higher, is placed for them to print on. This makes the desk, and in this there are ledges to confine the sand, leaving a space below, where the boys lean their left arms while they are printing on the sand with the right. The wood under the sand to be painted black, that the letter traced on the white sand may be seen distinctly. The monitor first gives out the letter to the class, then makes the letter on the sand before the child, who does not know how to do it, and requires it to retrace with its finger and continue until he can do it without assistance. The sand is smoothed over by a flat iron or a substitute made of wood after the lesson is over.

The letters are taught in three courses, according to similarity of form. (1) a line as in the letters I, H, T, L, E, F, i, l; (2) depending on the formation of an angle, as A, V, W, M, N, Z, K, Y, X, v, w, k, y, z, x; (3) a circle or a curve, as O, U, C, J, G, D, P, B, R, Q, S, a, o, b, d, p, q, g, e, m, n, h, t, u, r, s, f, j. The greatest difficulty in teaching is found in letters, the forms of which are alike and only distinguished by change of position—p, q, and b, d; but by making them at the same time, the children learn readily to distinguish them. Then again they are all printing at once, and it is curious and diverting to see a number of little creatures, many not more than four or five years old, some not so old, stretching out their little fingers with one consent, making letters. When this is done they sit quietly till the sand is smoothed by the monitor. By this mode, figures as well as letters are formed, following the same courses, until they become accurately and readily named.

ANOTHER METHOD OF TEACHING THE ALPHABET.

A pleasant change in learning the alphabet is provided for the little sand class by a large sheet of paste-board suspended from a nail on the school wall. Eight boys at a time are formed in a semi-circle before this alphabet, standing in their numbers marked

on the floor; similar numbers hanging round their necks, tied to a string or to one of their buttons, mark their grade of merit. The highest is the first questioned by the monitor, who points to a particular letter and asks, "What letter is that?" If he tells readily all is well, and he retains his place; but if he fails he forfeits it, with his number and ticket, to the next boy below who answers the question aright.

This plan promotes constant emulation. It continually employs the monitor's attention. He cannot look one way while the boy is repeating his letters another, or at all neglect to attend to him without being immediately discovered. It is not the monitor's business only to teach, but to see that the boys in his class or division teach each other. If a boy calls A by the name of B or O, the monitor does not say, "it is not B or O, but it is A;" he is to require the next boy in succession to correct the mistake of his senior. These two methods of the sand and alphabet card are made use of daily in rotation, and serve as mutual check and relief; figures are taught in the same manner. The teaching of this lower class is entirely connected with *printing*.

SECOND CLASS.

The second class consists chiefly of boys who, having learned to print the alphabet and figures in sand and readily to distinguish the same on the card, are then advanced to this class. Here they have regular desks, each with his slate and pencil ready to write as ordered. They have small slates on which they print, learn to make all the alphabet, small and large letters in *writing*; they learn these also from the cards, with *writing* letters. When they become fully familiar with these, then *words* are given—not separate syllables of a word, because children cannot attach any sense to mere syllables, and in fact they have no sense or meaning unless compounded into words above the comprehension of children in this class. The *words* given to be written should be so arranged as to contain all the letters of the written alphabet, which being recently learned would be easily forgotten, unless kept in memory by daily practice.

THE ORDER OF CLASSING FOR THOSE LEARNING TO READ.

1st Class, A B C.

2d " Words or syllables of *two* letters.

3d Class, Words or syllables of *three* letters.

4th " " " *four* "

5th " " " *five* "

6th " Reading or spelling lessons of two syllables and in Testament.

7th " Bible.

8th " A selection of boys who read best from the 7th class.

Thus each class has its separate set of lessons. Its attention is simply devoted to one object, and boys in one class are not to be suffered to mix or sit with the boys in another. After having learned the writing alphabet, whatever class the scholar may be in, he must write on the *slate* the same that he reads and spells in his reading or spelling lessons on the cards: in the two-letter class, he must write words of two; and so in course with three or four or five letters.

The order of teaching the children in school should be to have the 1st class next to the master's desk, and the other classes in numerical order after it. By this means the youngest children will be more immediately under the master's eye.

If the scholar can perfectly repeat all the lessons belonging to the 2d class, he must be placed in the 3d; if he can repeat well all belonging to the 3d, he must be in the 4th; the same rule to be observed in forming the 5th, 6th and 7th classes. The 8th class, to be the best readers from the 7th, are admitted to the use of books for the improvement of their minds, which the lower classes are not allowed.

FIRST CIPHERING CLASS.

The first object is to teach children to make figures. In order to do this, the class learning to make figures are assembled under the monitor by themselves in one part of the room. It is to be observed that the same boys who are in one class according to their proficiency in reading, are in another according to their progress in arithmetic. On the commencement they always go to their different reading classes, and afterwards, when ciphering, to their several arithmetical classes; and after they have done ciphering, return to their reading classes before they go out of school. The modes of teaching arithmetic are so simple and easy, that all

the boys who can read and write text-hand in four letters are put into the ciphering class.

GRADATION OF CLASSES IN ARITHMETIC.

No. 1 pupils, learning to make and combine units, tens, etc.,
 2. Addition. 3. Compound addition. 4. Subtraction. 5. Compound subtraction. 6. Multiplication. 7. Compound multiplication. 8. Division. 9. Compound division. 10. Reduction. 11. Rule of three. 12. Practice.

In teaching the Addition class it is not limited to number. The monitor takes an addition table, uniting units with units, and *tens* with *tens*: every boy has a slate. The monitor reads from the table, 9 and 1 are 10, etc., 25 and 1 are 26, etc., and other variations of the same table. When these are dictated each boy writes them on his slate. This method has also its counterpart: an arithmetical table is placed on the wall without the amount of each combination annexed; then the monitor puts the question how much are 9 and 4, and the boy is expected to answer the amount of the numbers given. The boys in this class are called out in successive numbers of twelve, each to answer questions applicable to the similar lesson of the day on the slate. These exercises are varied through the first four rules of simple addition, subtraction, multiplication and division. Then sums are given out to the whole class of 4 or 5 rows of figures in columns, then the questions asked respecting the amount to be set down on the slate, giving the amount of the several columns one by one. Then the whole amount in *words* must be written under the amount in *figures*. It is necessary that the most frequent combinations occurring in the first four rules should be made familiar to their memory; for the frequent recurring of one idea, if simple and definite, is alone sufficient to impress it on the memory without sitting down to learn it as a task. The scholars by writing acquire a thorough knowledge of numeration expressed in words and figures, without studying it as a separate rule. In fact, almost every other branch of knowledge taught in the different classes in my school, is acquired in the same easy and expeditious way from the practice, and not from the study. In giving out the sums to be set down on the slates, the monitor has a *printed book of sums* which his class is to do, and has also another printed book containing a

key to those sums on a peculiar plan, and which fully shows how it is to be done. Any boy that can read and numerate can perform this duty as well as the principal monitor, in reading the sum to be written on the slate. In this way, and by testing the sums by the *key* to see if the answers are correct, three times the usual quota of sums can be done and repeated by every boy. The expeditious progress made both in writing and accounts is so great, they need only commit to writing a very short specimen of their sums to satisfy their parents. By using their pencils well, they acquire an equal facility in using their pens.

DIFFERENT CLASSES OF MONITORS.

Monitors are of three descriptions—some for tuition, some for order, and in large schools inspecting monitors. Of these last very few are requisite, even in a very large school. It is the duty of the master to ascertain that each monitor is fully competent to teach the lessons of the class he is appointed to. As it respects arithmetic, the master should ascertain by individual examination, whether the pupil he selects as a monitor is proficient in the mode of teaching each particular sum or lesson appointed to be taught to his class. The monitors of reading and spelling should not only be able as scholars to understand and prepare the lessons they are appointed to teach, but be instructed in the mode of teaching.

APPOINTMENT OF MONITORS.

In the first five classes monitors may be appointed from the next superior class to teach the one immediately below it. This will ground the monitors in the lessons they have themselves last learned, by the act of teaching them. The monitors are responsible for mistakes committed; hence the necessity of their careful examination of the work of the scholars, before it is submitted to the inspection of the superintendent.

ORDER AND COMMANDS.

On a large scale of education it is unavoidable to do without giving many commands, and some of a very trivial nature. On my plan many of the commands, which in others would be given by the master, are given by the monitors. It is needful to limit the number as much as possible; it is an important object to

secure implicit obedience on the part of the scholars, and for the monitors to acquire as prompt a manner of giving them as will secure the attention of the classes, and lead to a ready compliance. The first of these objects is easily obtained: it is only to write down on paper the commands most necessary to be given by the monitor to his whole class; and it is *essentially* needful that he should not vary from the rule once laid down.

The practice of giving short commands aloud, and seeing them instantly obeyed by the whole class, will effectually train the monitor in the habit of giving them with propriety. None of the commands are in themselves a hardship; the power of example facilitates the establishment of order. Children are imitative creatures; they enter into a new school, they see all in order around them; they see promptness and alacrity in obeying every command given, and before the effect of the novelty is worn off new habits are formed. They do as they see others do, by the influence of example.

The classes should also learn to measure their steps, when going round the school in close order, to prevent what else would often occur from their numbers, treading on each other's heels or pushing each other down. In this case measuring their steps commands their attention to this one object, and prevents their being unruly or disorderly. It is not required that the measure be exact, or a *regular step*, but that each scholar should attempt to walk at a regular distance from the one who precedes him. Without the facility with which the authority of a monitor or commander may be delegated or transferred from one to another, the system of order would be a nonentity. Were it not on a level with the lowest capacity, capable of this delegation, and possessed of so much simplicity, these new modes of instruction, valuable as they are in themselves, would be inefficient. The attempt to promote learning, without the principle of order, would be like the efforts of the eastern nations, when Nimrod, in the despotism and pride of his power, attempted to build the Tower of Babel, but only succeeded in producing confusion and an abandonment of his schemes.

OBSERVATIONS FOR MASTERS.

There is one error teachers are apt to fall into: that of giving commands themselves, either calling aloud for order or silence

among their scholars. On the old plan of teaching, the authority of the master is merely personal. When he comes into school, fear produces silence, *pro tempore* at least. When he goes out, all is bustle and confusion, and the under-teacher is rarely regarded in the absence of the Principal. This originates in the personality of the master's authority.

In the army, authority is vested in the system more than the person. The station, more than the man, commands obedience, and the subordinate officer is as readily obeyed as the commander-in-chief. The order of war will not become disorder by an application of it to the purposes of peace.

The less a master's voice is heard among his scholars, the better he will be obeyed. He should be a silent by-stander and inspector. What a master says must be done, and in a school well regulated the business will go on as well in his absence as in his presence, because his authority is not personal. This mode of insuring obedience is a novelty in the history of education.

The various forms and designs of "Rewards and Punishments" to suit the different degrees of merit or offences, are fully described in several pages; many are strange and ingenious, but they are so unsuited to our times and ideas, that it is unnecessary to transcribe them.

THE SCHOOL CIRCULATING LIBRARY.

This excellent institution was formed in the Lancasterian school as a species of reward for the higher and more intelligent classes of scholars, as a school circulating library. The teacher has experienced during 13 years the advantage of this plan he adopted. The books are considered as school property, only lent to read, but never given away. Indeed, not only the children have been benefited, but a book has been known to be read at home by the parents and relatives of the pupils. One book has been known to pass through the hands of a hundred scholars. If a boy uses a book improperly, he is not allowed to have another. Every boy who is a candidate for the use of books in the library must obtain a given number of tickets as a reward of merit, equivalent to a given number of weekly tickets, to entitle him to a book according to its value. Only one book at a time to be lent, never to be kept more than a week, to be kept clean on pain of forfeiting the

privilege of the library. If a book is lost or negligently destroyed, the value to be paid by the parents or the pupil to forfeit his stock of prizes and tickets at the time of the loss.

SCHOOL CIRCULATING LIBRARY—LIST OF SOME OF THE BOOKS.

Martinet's Catechism of Nature. The Picture of London. Taylor on Dogs. The Wonders of the Horse. The Grammar of Geography. Power of Religion on the Mind, by Lindley Murray. The Book of Trades, or Library of Useful Arts. History of Discoveries and Inventions. British Nepos, by Mavor. The Naval Plutarch. The British Neptune, by Dr. Burney. The Grammar of History, by Sir R. Philips. The Wonders of the Microscope. The Wonders of the Telescope. Beauties of Sturm's Reflections on the Works of God, by Elizabeth Andrews.

To the above list other useful books were added, including the following works written by Priscella Wakefield: "Juvenile Travelers," "Family Tour in the British Islands," "Excursions in North America," and "Mental Improvement."

A REVIEW OF THE FOSSIL FLORA OF NORTH
AMERICA.

FOR years, the explorations of Dr. F. V. Hayden in the Rocky Mountain regions, pursued under the direction of the Department of the Interior, have awakened a deep and general interest by the remarkable natural phenomena which they have brought to light. Not only have these explorations penetrated into unknown regions, tracing out broad areas the existence of which was not fully realized, and the discovery of which has been recorded as of as great moment as any of those made at our time. Not only have they reported great valleys in the middle of the mountains; parks prepared by their fertility for a future population; rich mining districts abounding in precious minerals; wonders of nature also, like the Geysers of the Yellowstone, rivaling in splendor the greatest marvels of the world; but they have

opened to science new fields of researches where American naturalists have found treasures of fossil remains, a world of unknown species of animals and plants, which enrich beyond expectation the annals of science of this country. The discoveries of remains of huge saurians and of mammifers, of deposits of rocks composed of shells of remarkable kinds, have been already recorded at different times, and even telegraphed through the country on account of their importance.

The great lignitic coal fields also, extending along the base of the Rocky Mountains in the whole width of the United States Territories, from New Mexico to Oregon, were scarcely known before the explorations of Dr. Hayden, who defined their outlines and areas, and recorded the multiplicity and richness of their deposits of coal. The Lignitic is for the West what the great Appalachian Coal region is for the East, but more valuable still perhaps for the commonwealth, as without these deposits of combustible mineral, the Rocky mountain regions, and the great western plains at their base, would be uninhabitable.

Our special branch of the researches pursued by Dr. Hayden's explorations, relates to vegetable paleontology. Collections of fossil plants have been extensively made under his direction, especially with reference to the determination of the geological age of the lignitic formations, and of the cretaceous Dakota group of Kansas. It is on this subject of vegetable paleontology that this article is written. I do not propose, however, to give herewith a description, nor even an enumeration, of the species of fossil plants which were discovered by Dr. Hayden; but to go through an abridged review of what is known as yet of the North American fossil flora; marking some of its essential characters at different periods, pointing out some of the results that have been already obtained by the application of vegetable paleontology to physical and geological science, and what we may expect from it when the field scarcely opened is explored with more interest and more exhaustive research.

A brief history of our North American flora, pointing to the origin of some of our more valuable and generally known species of trees, and to the preponderance and the facies of their families at different times, may prove of general interest, and be the more acceptable as it does not require for its comprehension any peculiar

acquaintance with botanical science. The few details necessary for the understanding of the whole may be explained in a few words.

The great primary divisions of the vegetable kingdom as they are generally admitted now, are: 1st. The Thallogens, plants with mere cellular tissue, like the Algæ or Sea-Weeds, the Lichens, the Fungi. 2d. The Acrogens, flowerless plants, like the former, but composed of a woody tissue and of vessels. To this class belong the Ferns, known by everybody; the Lycopods or Club-Mosses, the Equiseta, generally named *Horsetail*. 3d. The *Gymnosperms* or Cone-bearing plants, like the *Conifers* and the *Cycadææ*. 4th. The *Endogens*, or Monocotyledonous plants, which grow and increase from the inside, like the *Palm*, the *Grasses*, the *Lilies*, etc., and 5th. The *Exogens* or *dicotyledons*, whose representatives mostly compose our present arborescent vegetation.

In regard to their character, these classes are generally admitted as of a gradually more complex and complete organization in ascending from the lowest division, the Thallogen; and it is also a well established opinion that in the geological succession of their representatives, the plants of the lowest order appeared first, and were followed by species of the other divisions, in the succession indicated above. The facts, however, in support of this assertion are not yet sufficiently ascertained.

The original or first crust of the earth's surface is composed of crystalline rocks, metamorphic or changed by fire, where no forms of organized bodies can be recognized. Vegetable life, however, seems manifested in these primitive rocks by deposits of graphite, a metamorphic carbonaceous substance, whose origin, like that of all the other combustible minerals of this world, is attributable to the plants, and to animals also, of which carbon is a compound. The Algæ of the simplest structure consist of single isolated cells; like the *Diatomaceæ* and *Desmidaceæ*, which are the smallest vegetables known, and which, simple as they are, represent, however, most beautiful and innumerable forms appreciable only by microscopical investigation. These kinds of Algæ live everywhere, in the hottest springs and the snow of the glaciers, on sand or mud, on every kind of substance; they multiply rapidly and in enormous proportions. In some localities, the water of the sea is colored to a depth of many feet and over a surface of wide extent by the pres-

ence of the *diatomaceae*; plants so minute in size that a million of them may live in a drop of water. The peculiar nature of these unicellular plants confirms the idea that they have appeared with the first consolidated strata of the globe.

To their life, therefore, the origin of the deposits of bitumen or carbon, as represented by graphite in the primitive rocks, is probably due. The temperature of these rocks, originally in a state of fusion, has been considered as an objection to this opinion. But even at the present epoch, Algæ of a higher degree of organization fill, by their threadlike filaments, basins of thermal water whose temperature reaches 100° C, as in the Hot Springs of Arkansas, or in the Geysers of the Yellowstone.

Immediately above the crystalline rocks, and from the beginning of the stratified deposits of the lower Silurian, whose substance has been derived from the disintegration and the removal of primitive materials, vegetable fossil remains are recognizable.

They represent marine plants, of course, mostly of indefinite forms, like crushed bundles of filaments whose contours are obliterated in a black carbonaceous or bituminous mass. In passing higher up, in beds of the same period, the forms become more distinct and less disfigured by compression, but mostly remain simple however, like narrow cylindrical, rigid or flexuous stems, without branches and with smooth surfaces. These characters seem to indicate a simple structure of the Algæ by juxtaposition of elongated cells joined by their ends, as are now the threadlike filaments of the thermal springs. In ascending still higher—to the upper Silurian—these fucoids appear more diversified; they bear branches, their surface is wrinkled or striated in many ways, and their characters being thus more distinct and multiplied, they are open to analysis.

Already a number of them have been described from these strata. At the same time the fossil remains increase in number to such a degree that strata of shale or of limestone seem, locally, to be a compound of fragments of sea weeds. As these petrified plants apparently represent mostly the species of a coriaceous hard tissue, the profusion of their remains may give an idea of the exuberance of the marine flora during the more ancient periods of our earth. It was evidently still greater than at the present time, though the activity of this vegetation is now manifested to a high

degree by the heaps of the bladder weed and other species along our shores, as also in middle ocean by banks of the floating *Sargassum*, covering thousands of square miles, and thick enough to impede or almost stop the progress of ships. The fucoids of old, some of which were of great size, though composed only of vascular tissue and without woody fibres, foreshadowed the appearance of the coal plants, as already they did play in the economy of nature a somewhat analogous part. From their decomposition have resulted the deposits of bitumen or mineral oil, which man's ingenuity uses now to an advantage not equal, indeed, but comparable, to that which he derives from the coal.

The remains of sea-weeds do not give any indication of the temperature or the atmospheric circumstances governing our globe during that long Silurian period when water covered most of the surface of the earth, either in a condensed form, as fluid, or as vapor.

The temperature of the sea was of a higher degree, evidently, than it is at the present time even under the influence of tropical heat. The simple structure of the sea-weeds and their cylindrical form seem to indicate this physical fact by the co-incidence, remarked above, of confervoid plants of simple and analogous conformation found now in the hottest thermal water. In the whole thickness of the rocks formed during this long period, which in some countries, as in England, attain a thickness of 60,000 feet, no traces of land plants have been positively observed. A few cylindrical branches or mere impressions of branches upon clay, bearing upon their surface obscure scars resembling those of *Lepidodendron*, were lately discovered in the Cincinnati group of the middle Silurian. As they are associated in the same strata with fragments of fucoids and with deep marine mollusks, their relation is to be considered as being rather with peculiar forms of Algæ, so long as the evidence is not satisfactorily established from more distinct characters. It seems, therefore, that during the Silurian period no land surface was exposed above the surface of the water, or rather that the exposed land did not receive any kind of inhabitants—no plants, and consequently no animals.

In the whole thickness of the following period, the Devonian, the marine vegetation is still predominant, as testified by fucoidal remains profusely imbedded in the rocks, and by the numerous

and richest deposits of bitumen discovered as yet by human agency. The forms recognized in the fossil remains indicate a more diversified kind of vegetation, and a more complex and more perfect structure. Some of the species have already characters which seem identical with those of more recent fossil species, and even closely allied to some of our time. This correlation is explainable in two ways: First, In supposing that, as vegetables have characters in accordance with the surroundings wherein they live, marine plants vary especially according to depth and pressure, to the temperature of the water, and also to its proportion of saline or other mineral elements. All these agents are not subject to modifications either as distinct or as rapid as those which govern the atmosphere, and therefore the types of the Algæ are preserved for a long time less diversified and more widely distributed than those of the land plants. On another side, the difficulty of exact determination of fossil Algæ may be taken into account for explaining the cases of identity as merely apparent, the more important characters of those plants being more or less undiscernible in a fossil state. The first evidence of land vegetation is found at the base of the Devonian, in fossil remains of a Lycopodiaceous species whose size is about the same as that of the larger club-mosses of our woods. This species, named *Psilophyllum* by its discoverer, Prof. Dawson of Canada, has evidently the characters of the club-moss family; branches unfolding like those of the ferns, by unrolling (circinate); stems dividing alternately by the forking, and bearing both upon their own bark and that of their creeping rhizomas, the scars or the marking of the point of attachment of the leaves. Most of the fossil species of this family are characterized and identified by the form and the position of these scars, which, though generally round upon the rhizomas, are rhomboidal and diversified indeed upon the stems. Originally, or when seen upon young branches wherefrom the leaves have been recently detached, these scars are small, scarcely the sixteenth of an inch in diameter; they increase, however, rapidly in size, proportionally to the enlarging of the stem, and upon large trunks measure sometimes one-and-a-half ($1\frac{1}{2}$) inches in diameter. In the oldest and more remarkable order of this family, that of the *Lepidodendra*, the scars are generally contiguous and in spiral order. In

another, that of the *Sigillariæ*, they are more generally placed in vertical series and at a distance from each other.

The presence of the land plants recognized in the lower Devonian becomes gradually more marked in ascending, but rather by the increasing size of the representatives than by their number. A few stems only of *Lepidodendron* are recorded from the middle Devonian. In the upper part only do the remains of land plants become of more frequent occurrence. Here they represent already all the vegetable divisions recognized in the subsequent period, that of the Carboniferous, and even more. For in the United States, at least, the Chemung Period of the Devonian age has species of *Lepidodendron* and of *Sigillaria*, species of *Calamites* representing the Equisetacea family, a considerable number of ferns, already some of them typically allied to those of the coal, and a few species of uncertain relation; *Flabellaria* and *Noeggerathia*, known by long striated ribbon-like leaves, and which have been considered as representing a family of vegetables intermediate between the Lycopodiaceæ and the Cycadæ, and it has also, which is more remarkable in considering the vegetable scale of distribution, large trunks of fossilized and solidified wood, recognized by its structure as representatives of a genus of Conifers, the Araucariæ, some species of which still exist in the flora of our time, inhabiting the southern part of the American continent and the Southern Islands, New Holland and New Caledonia. The presence of these Conifers in the Devonian of North America is remarkable for two reasons: First, because they enter the land flora about the same time as the Lycopodiaceous species; and secondly, because as yet no remains positively referable to Conifers have been recognized in the Carboniferous formation of the United States, though species of the same relation are described from the sub-carboniferous measures of Canada and of England.

A few of the species of ferns of the Chemung group, or upper Devonian, are related to species of the coal measures, especially in the section of the Neuropteridæ; they greatly differ, however, in their general facies and their specific, and even generic characters. The Devonian type of the ferns passes up into the Umbral or sub-carboniferous formation of Pennsylvania; while in the west, where the sub-carboniferous is composed of a succession of limestone and sandstone strata, its flora is, on the whole, of the same type

as that of the coal, though of course in a far less number of representatives.

We have then in the East a sub-carboniferous flora of Devonian character; while in the West, the formation which is considered as of the same age is truly of the carboniferous type, without any exception. The difference is attributable to that of the composition and of the formation of the strata.

The land flora of the carboniferous period is known by the great quantity of fossil remains, corresponding, in their proportion, to the prodigious exuberance of a vegetation which has furnished the compound materials of the coal strata. Concerning the character of the plants, the coal epoch has been named the reign or the period of the *acrogens*—the whole flora, from the base of the millstone grit, or even from the first traces of the lowest beds of the sub-carboniferous, to the Permian, being represented by species of this class; ferns, Equisetaceæ, and Lycopodiaceæ, as remarked already. The ferns are very numerous; nearly three hundred and fifty species have been described by European authors, and half this number as yet is recorded from the North American coal measures. They are classed and specially defined by the forms of the fronds and the leaflets, and by the nervation. By these characters, the relations of the species of the same period to each other are sufficiently established; but not so well to the species living at this time, for the reason that these are generally classified and determined by the fructifications, which are rarely found in a fossil state, or not preserved distinctly enough to afford trustworthy points of comparison.

The first and most interesting group of these ferns of the carboniferous measures is that of the *Neuropteridæ*, mostly representing bush ferns of great size, whose widely-expanded fronds, many times branching, had compound leaves, with large cordate leaflets and a close flabellate nervation, their veins being either straight or curved backwards to the borders, dichotomous or forking in descending. The leaflets, which are generally found isolated or detached from the rachis when petrified, are in some roof-shales heaped and pressed upon one another in innumerable number, and thus, at first, appear as if derived from trees; but in some localities, as at Pomroy, Ohio, for example, the roof of the coal when exposed by the miners may be compared to a petrified

ground, strewn with stems, branches and leaflets of the same genus. These stems—or rather rachis or fronds—are seen measuring six inches in diameter. The family of the Neuropteridæ is apparently the first represented, and the more generally predominant family in the coal measures. Some of its species are found in the sub-carboniferous coal beds of Arkansas, where they are marked with a large proportion of the remains of *Lepidodendron*; they become most numerous in the lower coal strata above the millstone grit, together with large species of *Alethopteris*, and sensibly diminish in passing up to the upper coal beds. Two or three species only have been found with the Pittsburg coal. In Europe one species, *Neuropteris Loschii*, one of the most common plants of the coal flora of both continents, passes up into the Permian. The family of the *Pecopteridæ*, some forms of which are comparable to species of *Pteris* and of *Cyathea* of our time, has already some representatives in the lower coal, especially species of *Alethopteris*, with their large leaflets. But it becomes more and more abundant in ascending, and in the upper part of the formation is the principal representative of the fern flora. A beautiful species, *Pecopteris arborescens*, has been found in barren shales far above the Pittsburg coal (or the productive coal measures), and in Europe, at least, it continues on in the Permian. These *Pecopteridæ* are generally represented by branches and leaflets which, many of them at least, are derived fragments from tree-ferns; their trunks, which are rare in connection with the lower coal beds, are locally very abundant in the middle and upper coal measures.

In the family of the Lycopodiaceæ, the most interesting groups are those of the *Lepidodendron*, *Ulodendron*, *Sigillaria* and *Stigmara*, whose characters, as taken from the scars of their bark, have been briefly remarked upon already. The remains of *Stigmara* are especially numerous in the whole thickness of the carboniferous strata, and are distributed in every kind of rock, except in the limestones. They especially fill the clay beds under the coal, often appearing as the essential component of some of these beds, and sometimes, to a thickness of fifty feet or even more. They represent the rhizomas or floating stems of the Lycopodiaceæ, *Lepidodendron*, *Sigillaria*, etc., these being the stems or trees that bear cones as their fructification. We recog-

nize the same conformation in the club-mosses of our epoch, which, like *Lycopodium inundatum*, *L. arboreum*, etc., have creeping stems bearing, on the under side, long, thread-like filaments penetrating the ground, or rootlets creeping in wet mosses or soft mud, while their fructius stems are erect and have leaves and cones. The more ancient Lycopodiaceous representatives in the coal are the *Lepidodendron*. The *Sigillaria* appear later and persist longer. While *Lepidodendron* species have not been as yet recognized in connection with the Pittsburg coal, many species of *Sigillaria* are there; and, in Europe, one species at least of this last genus passes up to the lower Permian.

The Equisetaceæ, or Horsetail species of the present time, have cylindrical, articulated stems, scarcely measuring one inch in diameter. The principal species of this group occurring in the coal measures, the *Calamites*, were trees similar in their structure, with hollow, articulated trunks, and striated surfaces, but comparatively of a great size, their trunks varying from two to eight inches in diameter. Their branches were borne at and round the articulations, and they had at the nodi whorls of narrow, small, linear, lanceolate, sharply pointed leaves. As these branches are rarely found attached to their stems, they were for a long time considered as representing distinct species, and separated in the descriptions under the fine name of *Asterophyllites*. These *Calamites* had a rapid growth; their stems grew close to each other, forming dense thickets, like the canes of the southern swamps, which each year rise up impenetrable groves by their compact vegetation. The *Calamites* appear early in the sub-carboniferous, or even the upper Devonian; they persist longer, passing up to the Permian, where they are represented by especially large species of the *Equisetum*. They have entered by their remains into the formation of all the beds of coal, and in some localities become the essential compound of the combustible matter.

Some other genera of the carboniferous flora are represented by water floating plants of comparatively small size and of more indefinite relations. The more important are the *Annularia*, or plants whose branches surrounded the stems, like the ribs of an umbrella, and whose cylindrical or flat lanceolate leaves, larger than those of the *Asterophyllites*, are like them placed in rows around the articulation of the branches, like the spokes of a wheel.

The *Sphenophyllum* also, with stems divided in about the same way as those of the former genus, had their leaves also in whorls, but flat, enlarged upwards or wedge form from the base, and with a nervation analogous to that of the ferns. These two genera represent apparently a family of plants intermediate between the Equisetaceæ and the Lycopodiaceæ. They are widely distributed in the whole extent and thickness of the coal measures, and limited to this formation. Like the Calamites, they are represented by few species, with however a very active and luxuriant vegetation, as indicated by the profusion of their remains. It was the same with the long ribbon-like leaves of *Flabellaria*, varying from one to three inches broad, which have been remarked upon already in the Devonian flora. Though their remains are most abundant in the Carboniferous, no plant has yet been found in connection with its essential organs, the fruit. The leaves embrace at the base a stem of from one to two inches in diameter, but even this stem has been very rarely observed. The relations of these plants have therefore exercised the researches and ingenuity even of Paleontologists without a satisfactory result; for this relation is still as uncertain as when, years ago, the celebrated Corda made the well-known analysis of the texture of a stem. The leaves evidently represent different species, but their characters are uncertain. They have been described by authors under the name of *Flabellaria*, *Cordaites*, *Noeggerathia*, etc., and now Schimper, in his great work on vegetable paleontology, recalls the old name of *Pycnophyllum*, formerly proposed by Brongniart. Such are many plants of the coal measures whose characters and relation are vaguely pointed out by isolated organs, fruits, leaves or stems, and whose true nature is a secret which may only be revealed by new discoveries. The remains of these *Flabellarie* which first appear in the Upper Devonian and have numerous representatives of two species in the strata of the lower Carboniferous, become still more abundant in the upper coal measures, and, in Europe, pass upward and into the Permian by two species also, the characters of which, however, here seem to be more positively related, and as a kind of transition, to the Cycadaceæ.

A summary sketch of the flora of the carboniferous cannot even give an idea of its luxuriance and fecundity. From the immense amount of materials which it has given to the production of the

coal, and from its general characters, it indicates the condition of the atmosphere at this period to have the character of an extremely humid, rather than a very warm climate. The whole atmosphere was impregnated with vapor, and, in consequence, with a proportionate amount of carbonic acid. These elements played the part then that they do now, promoted the activity of the vegetation to the highest degree, especially that of the ferns and the *Lycopodiaceæ*, which by their present vegetation, show their present partiality for foggy countries, or the shade of humid forests, and of the *Equisetaceæ*, which live in swamps. The ferns were of much larger size than they are now, either as bushy species or as trees. Fossilized trunks of ferns have been found in the Ohio coal fields, measuring more than one foot in diameter; while at our epoch, and even in the tropical regions, the trunks are rarely half as large. The stems of our present species of lycopods and horse-tails are scarcely half an inch thick, while trunks of *Sigillaria* and *Lepidodendron* have been recorded as measuring two feet in diameter, and, as remarked above, the stems of *Calamites* vary from two to eight inches in thickness.

This giant vegetation was not, on account of its huge proportions, deprived of beauty; on the contrary, nature seems to have given splendor to its work, in proportion and as compensation for the deprivation of animal life. The harmonious elegance of the coal flora is clearly manifested by its remains preserved by fossilization.

The trunks of Fern-trees, as those of *Sigillaria* and of *Lepidodendron*, of an exact cylindrical shape and of the same size in their whole length, finely carved upon their bark in spiral or vertical rows of scars, of diversified and always symmetrical and elegant patterns, represent the most elaborate designs of architecture. They are like fluted columns of Corinthian or Doric order, covered from base to top by garlands and arabesque, and crowned by capitals of equally elaborate style. These, adorned by depending fronds of parasitic ferns, support, as roofs, spreading recurved branches, arches, cupolas, domes, painted by the multiple forms of fern leaves, more diversified and more graceful and fair than could be any ornamentation inspired by the imagination and executed by the skill of the greatest painter. Under this canopy and in this dark temple of nature, wherein, as in the great cathedrals of old,

gloomy, subdued light penetrates only by bow-windows, fringed and latticed by interlacing ferns and branches, the ground is strewn by vegetable debris intombed under mounds of verdure. Upon the wide open surface of the swamps and bogs, the vegetable regime still manifests its power by extending over the whole its thick carpets of water plants with the interlaced floating rhizomas of *Stigmara*, over which are raised and supported groups of *Calamites*, whose graceful branchless stems recall the forms of Moorish minarets, when seen from great distances on approaching the borders of the sandy deserts. There is not a paleontologist whose admiration has not been deeply excited by the study of the fossil remains of the flora of the coal formation. Some have tried to represent its aspect by the design of the painter, but designs, like descriptions, are vain in an attempt of this kind.

LEO LESQUEREUX.

(*To be Concluded.*)

FUSANG.¹

IT is well known to those who are interested in American archæology that Chinese historians make mention of a land, called Fusang, which from its direction and distance from China is thought by some scholars to have been a part of Western America, probably Mexico. The story is that near the close of the fifth century of our era, there arrived in one of the provinces of China a Buddhist priest or missionary, who reported having visited this land of Fusang, gave a description of it, and stated further that he had been preceded thither by other priests, who had converted the inhabitants of the country to the religion of Buddha, and had introduced among them his sacred writings and images.

How much credit is to be given to this story, and whether there are sufficient grounds for identifying Fusang with America, are questions upon which hitherto it has not been easy to pronounce

¹Fusang; or the Discovery of America by Chinese Buddhist Priests in the Fifth Century. By Charles G. Leland. Pp. 212. New York: J. W. Bouton. 1875.

an opinion. What has been written on this subject by scholars who have given special attention to it is mostly scattered in the pages of French and German society publications and in other works not readily accessible to American readers, while the allusions to the story of Fusang which one now and then meets in the writings of American antiquaries are meagre and unsatisfactory, and on the whole are not calculated to leave a very favorable impression of its value as a historical document. Mr. Leland has, therefore, done us a good service by collecting from these sources the principal evidence and arguments used to support this hypothesis of a discovery of America by the Chinese, and also giving the history and the present aspect of the whole question. He is himself a warm advocate of the claims put forward for the Buddhist priests, and, besides translating entire a valuable paper on the subject by the late Professor Carl Neumann, of the University of Munich, and citing the opinions and arguments of other scholars, who, like Neumann, were acquainted with Chinese literature and history, he has added some new evidence bearing on the case, principally to illustrate the ease with which the passage from Asia to America can be effected, and the probability of communication between the two continents having formerly been not infrequent.

Mr. Leland, is, however, far from claiming that as yet there have been obtained any conclusive proofs of this supposed visit of the Chinese to Mexico. The utmost that he maintains is, that the story has an air of truthfulness which entitles it to serious consideration; that the opinion that Fusang was some part of America was at the first well grounded and has been strengthened, rather than weakened, by recent discoveries; finally, that while the former presence of Chinese on this continent has not absolutely been proved, there are many indications of it, and further investigation will probably settle this question definitely. His object in publishing this book has been rather to commend the subject to the attention of scholars who are in a position to make further researches, than to attempt to establish the claims of the Chinese on the evidence which is at present available. That he has succeeded in placing the case in a very favorable light, none of his readers will be disposed to deny. In fact, far as it is from being decided, it rests, we think, on quite as solid a basis, both of *a priori* probability and of evidence, as that of the

Northmen who are thought to have visited the eastern coast of America in the eleventh century.

The "Chinese theory" is probably the least generally known of all the theories of pre-Columbian discoveries of America, and we presume a brief review of it will not be unacceptable to our readers.

The story of Fusang, of which an abstract is given above, occurs for the first time in Chinese literature in the form of a regular entry in one of the "Year-Books," in which were kept the accounts of the Empire and notices of important events which took place in the several provinces. These Year-Books are regarded as of the highest authority on points of Chinese history, and this account of Fusang seems, therefore, entitled to a degree of consideration which could not be claimed for any mere floating tradition. As the value of the speculations based upon it will be judged in a great measure according to the accuracy with which the description of Fusang applies to America, we shall here transcribe the account entire, as it has been translated by Mr. Leland from Professor Neumann's German translation of the Chinese original. It may be well to premise, however, that the Fusang-plant, from which the country derived its name, is supposed by the advocates of the story to have been the *Agave Americana* or Maguey of Mexico, and that Tahan is believed by Professor Neumann to be Alaska; by others, Kamtschatka. The account is as follows:

"During the reign of the dynasty *Tsi*, in the first year of the year-naming, 'Everlasting Origin,' (A. D. 499,) came a Buddhist priest from this kingdom, who bore the cloister name of Hoi, Shin, *i. e.*, Universal Compassion, to the present district of Hukuang, and those surrounding it, who narrated that Fusang is about twenty thousand Chinese miles in an easterly direction from Tahan and east of the Middle Kingdom. Many Fusang trees grow there whose leaves resemble the *Dryanda Cordifolia*; the sprouts, on the contrary, resemble those of the bamboo tree, and are eaten by the inhabitants of the land. The fruit is like a pear in form, but is red. From the bark they prepare a sort of linen which they use for clothing, and also a sort of ornamented stuff. The houses are built of wooden beams; fortified and walled places are there unknown.

"They have written characters in this land and prepare paper from the bark of the Fusang. The people have no weapons, and make no wars; but in the arrangements for the kingdom they have a northern and a southern prison. Trifling offenders were lodged

in the southern prison, but those confined for greater crimes in the northern; so that those who were about to receive grace could be placed in the southern prison, and those who were not, in the northern. Those men and women who were imprisoned for life were allowed to marry. The boys resulting from these marriages were, at the age of eight years, sold as slaves; the girls not until their ninth year. If a man of any note was found guilty of crimes, an assembly was held; it must be in an excavated place. There they strewed ashes over him and bade him farewell. If the offender was of the lower class, he alone was punished; but when of rank, the degradation was extended to his children and grandchildren. With those of the highest rank it attained to the seventh generation.

* "The name of the king is pronounced Ichi. The nobles of the first-class are termed Tuilu; of the second, Little Tuilu; and of the third, Na-to-scha. When the prince goes forth, he is accompanied by horns and trumpets. The color of his clothes changes with the different years. In the first two of the ten-year cyclus they are blue; in the next two, red; in the two following, yellow; in the next two, red; and in the last two, black.

"The horns of the oxen are so large that they hold ten bushels. They use them to contain all manner of things. Horses, oxen and stags, are harnessed to their wagons. Stags are used here as cattle are used in the Middle Kingdom, and from the milk of the hind they make butter. The red pears of the Fusang tree keep good throughout the year. Moreover they have apples and reeds. From the latter they prepare mats. No iron is found in this land; but copper, gold, and silver are not prized, and do not serve as a medium of exchange in the market.

"Marriage is determined upon in the following manner: The suitor builds himself a hut before the door of the house where the one longed for dwells, and waters and cleans the ground every morning and evening. When a year has passed by, if the maiden is not inclined to marry him, he departs; should she be willing, it is completed. When the parents die, they fast seven days. For the death of the paternal or maternal grandfather they lament five days; at the death of elder or younger sisters or brothers, uncles or aunts, three days. They then sit from morning to evening before an image of the ghost, absorbed in prayer, but wear no mourning clothes. When the king dies, the son who succeeds him does not busy himself for three years with State affairs.

"In earlier times these people lived not according to the laws of Buddha. But it happened that in the second year-naming 'Great Light,' of Song, (A. D. 458,) five beggar monks from the Kingdom of Kipin went to this land, extended over it the religion of Buddha, and with it his holy writings and images. They

instructed the people in the principles of monastic life, and so changed their manners."

The same Buddhist priest who gave this account of Fusang, also told of a country inhabited only by women, which lay a thousand *li*, or Chinese miles, still farther towards the east. But the whole story is intermixed with so much fabulous matter that Professor Neumann did not think that it was worth translating. Great stress is laid, however, by those who accept the remainder of the narrative, on the fact that Hœi-Shin describes this land of women on hearsay evidence only, and does not profess to have visited it himself. What he narrates as an eye-witness is of a different character. Although not entirely without its difficulties, still it contains nothing which can confidently be pronounced fabulous; but, on the contrary, is, for the story of an early traveler to a strange land, remarkably free from extravagant statements.

Other notices of Fusang occur in Chinese and Japanese literature. Those given by the historians appear, however, to be simply repetitions of this account in the "Year-Book;" while the Fusang of the poets and romance-writers, which was a land of marvels, is, it is claimed, the creation of a later age, and has, therefore, no place in the present inquiry.

This narrative of Hœi-Shin was first brought to the knowledge of European scholars, about the middle of the last century, by Deguignes, a learned French sinologist, who published in the "Mémoires de l'Académie des Inscriptions et Belles Lettres," an able paper in support of the view that Fusang was ancient Mexico. This view was subsequently attacked by Klaproth, who, without denying the truth of the story, was of the opinion that the Buddhist priest had not passed beyond the limits of Asia, and that Fusang was most probably the Island of Saghalien. Other scholars have, however, since re-advocated the view of Deguignes. Among them are Professor Neumann, whose paper forms the basis of the volume before us, and D'Eichthal, who reviewed the essay of Klaproth, and, as Mr. Leland thinks, confuted all his arguments. To go over the whole ground of this discussion is impossible in this place. It must suffice to present a few of the strong points in the evidence which supports Deguignes' view of Fusang, and to point out some of the obstacles which must be removed before it can be accepted as established.

It is urged, as strong presumptive evidence that the journey of Hwei-Shin was actually performed, that the fifth century was a period of remarkable activity among the Chinese Buddhists. During this century they prosecuted vigorously the work of proselytism enjoined upon the followers of Buddha, and frequently undertook long and perilous journeys for this purpose. The books of travel of Buddhist missionaries form of themselves a somewhat extensive literature, the value of which, as a source of information respecting the ancient geography of Asia, is now fully recognized by European scholars. There is nothing exceptional, therefore, in the story of Hwei-Shin and the "five beggar monks from Kipin." It is also an admitted fact that in the fifth century the geographical knowledge of the Chinese was already very extensive. They had a good knowledge of India and of the rude nations which surrounded them on the north and west. In the Pacific they had extended their discoveries southward at least as far as New Guinea, and northward to the sixty-fifth degree of latitude. They were acquainted with Kamtschatka, and probably with the Aleutian islands; and there is reason, Mr. Leland thinks, to believe that they maintained with the natives of these regions a regular trade in furs. At any rate, voyages or journeys in this direction are spoken of as events of ordinary occurrence. The precise locality of Tahan, the point of departure of Hwei-Shin, is still a matter of discussion. It is known, however, to have been "twenty thousand *li*" northeasterly from China, and whether it was in Kamtschatka, as thought by Deguignes, or was the peninsula of Alaska, as thought by Neumann, a journey of twenty thousand *li* to the eastward would most certainly have left the traveler in some part of America. It is to be noted, in this connection, that the route which appears to have been taken by the Buddhist priest—along the Aleutian islands, which stretch in an unbroken chain from near the coast of Kamtschatka to the American shore—is that by which this continent could have been reached the most easily by adventurous Chinese voyagers.

Thus far the argument, above outlined, proceeds smoothly enough. Indeed, could the case rest here, the proofs that Fusang was in some part of America—always assuming that the story of Hwei-Shin is entirely trustworthy—are so strong as to be almost irresistible. But in order to place the matter beyond question, it

must be shown that the description of Fusang applies to America, and that there is to be found in America unmistakable evidence of its former occupancy by Chinese Buddhists. Could either of these propositions be affirmed confidently, the question would be well-nigh settled; but this part of the inquiry is at present in a state very far from satisfactory.

Some parts of the description certainly do seem applicable to America. The Fusang-plant naturally suggests the Maguey, which subserves so many uses among the natives of Mexico; and the absence of iron in Fusang, and the small account there made of gold and silver, recall to mind the same country. Again, the manner of contracting marriage in Fusang, although not known to have been practiced by the ancient Mexicans, is strikingly American; customs very similar to this exist, as Mr. Leland remarks, in more than one North American tribe. But as an offset to these and some other points in the description upon which those who seek for Fusang in America rely, is the mention by Hwei-Shin of wagons and draught animals, among which is expressly named the horse. This part of his description is entirely at variance with all that is known of ancient America, and, until it can be accounted for more satisfactorily than has yet been done, is an obstacle to this view which is not easy to overlook. It is well known that neither the Mexicans nor the Peruvians had any draught animals, and that the horse, although found among the extinct animals of America, did not exist in any part of this continent at the time of its discovery by the Europeans. Professor Neumann suggests, indeed, that "it is possible that the Chinese described an animal similar to the horse with the character *Ma* or horse, for changes of this nature are of frequent occurrence;" and Mr. Leland cites instances of the very common practice among the ignorant of naming strange animals from their resemblance to those that are familiar, as when the Gypsies call the fox the "wood-dog," and the elephant the "great-nosed-horse." But it will be remembered that Hwei-Shin does not speak of this animal as simply horse-like—as a horse with some distinguishing mark—so that these are not strictly parallel cases. This point is the more noteworthy, because he is at some pains to distinguish the Fusang-plant which he saw from that known in China. It was not identical with the Chinese plant, he says, but only like it in

some respects. It may be as Professor Neumann says, that, however the error may have originated, "the unprejudiced and circumspect inquirer will not be determined on account of it to declare the entire story of Fusang-Mexico an idle tale;" but he surely will not overlook the fact that this is one of the few points in the description on which we can take a strong hold, and, until it is disposed of fully, it will out-weigh a vast deal of otherwise plausible argument.

Again, when we examine closely the description given of the Fusang-plant, it is by no means clear that the American aloe is the one meant. It appears that the plant known to Chinese botanists as the Fusang is quite dissimilar to this found in Mexico, and Mr. Leland, who has discussed the matter at some length, is driven to the hypothesis that Hwei-Shin had in mind a different Chinese tree—the Kousang—when he made the comparison. He leaves unnoticed, however, what seems a much more serious difficulty in the way of this identification, viz., the express statement, twice repeated, that the Fusang bore a red, pear-shaped fruit, which is not the case, we believe, with the American aloe.

This is, we think, a fair presentation of this portion of the question as it at present stands. The greater part of the description given of Fusang relates to customs and institutions with respect to which it is difficult to say whether they bear an American or an Asiatic stamp, and which can at best hold an unimportant place in the argument. Of the few remaining points which have a more certain value as evidence, unfortunately those which make squarely against the view of Deguignes seem quite as strong as those urged in its behalf. In fact, the extreme doubt which can be cast on the identity of America with the country described by Hwei-Shin is decidedly the weak point in the whole case. Yet we are not disposed on this account to abandon it as utterly hopeless, or to pronounce the story of Fusang "an idle tale." The authority upon which the story rests, its sober, matter-of-fact appearance, the strong support which can be given to it on the Asiatic side of the Pacific, the consideration that a visit to this continent was not impracticable to the Chinese at that period, and that its actual accomplishment is not wholly improbable—are sufficient reasons for not abandoning this inquiry so long as there is hope of obtaining some confirmatory evidence on the American

side. To recur a moment to the question of the internal evidence afforded by the narrative, a fact which strangely enough is overlooked both by Professor Neumann and by Mr. Leland, may possibly, when candidly considered, throw some light on the source of the chief perplexities in the description. Both these writers have treated the account in the "Year-Book" as if it had been written by Hwei-Shin himself. Whether there is any direct evidence on this point we are not told; but from the way in which the account reads, the more natural inference, we think, is that he was not himself its author, but that it was written by some official who entered in due form a report returned from the province. The Buddhist priest *may* have furnished a written statement to be copied, but there seems to be no warrant for this supposition. Of course it is useless to conjecture whether the writer of the account had seen and conversed with the returned missionary, or merely reported a matter of common rumor in this part of the empire. In either case it is quite consistent with probability that the account is substantially correct—that the direction and distance of Fusang from China, the existence there of a remarkable plant, the abundance of gold and silver in the country, and other main facts are correctly stated—and yet that it contains errors which, had it been revised by Hwei-Shin himself, would have been stricken out. While this view of the character of the entry in the "Year-Book" must necessarily throw some distrust on the whole story, by introducing into it a hear-say element, we do not see how it can well be rejected, and it may, after all, be quite as favorable for the advocates as for the opponents of the claims of the Buddhist priests.

We have said nothing on the subject of traces of Buddhism in America, simply because none sufficiently well marked to deserve serious consideration have as yet been found. When, however, it is remembered that this supposed visit to America took place fourteen hundred years ago, it is manifestly unfair to insist strongly on the significance of this negative evidence. At the same time it cannot be denied that the discovery on this continent of some relics of these Buddhist priests—some of their writings or images, or else some distinct and unequivocal traces of their doctrines—can alone settle decisively the question of Fusang. At present it is very far from being decided, and the weight of the evidence and

probability that America was, as is alleged, discovered by Chinese in the fifth century, is a point respecting which very wide differences of opinion can be tolerated.

In conclusion, we must pay a tribute to the entire fairness with which Mr. Leland has met the arguments of those who oppose Professor Neumann's view of Fusang, and to his extreme caution in discussing a very obscure and therefore a very tempting subject. His principal object, as before stated, has been to present the case of the Buddhist priests in such a light as will show it to be deserving of more attention than it has yet received from American scholars, and this he has done in a very satisfactory manner and with a full and candid admission of its weak points. His book is one which we can cordially commend to all who are interested in the study of pre-historic America, and we trust it will fulfill its mission, and will incite to further research, both in this country and among the archives of the Chinese.

In a paper read before the New York Geographical Society, in January, 1873, by Augustus Le Plongeon, M. D., on the "Vestiges of Antiquity," evidence of the former presence of the Chinese on this continent is adduced which, if it can be unreservedly accepted, is conclusive. It is stated by Dr. Le Plongeon that there have been found in a district of Peru several antique images, seen by himself, which are inscribed with characters resembling the Chinese, and actually recognized as such by an "intelligent Chinaman" who examined them. As this discovery has a direct bearing upon the story of Fusang, and as Mr. Leland has made no mention of it, and perhaps is not aware of it, we will extract here the entire passage from Dr. Le Plongeon's paper:

"To-day, on the northern coast of Peru, exists a small village, called Eten, the dwellers of which speak a language that their neighbors are unable to understand; but they find no difficulty in holding communion with the Chinese coolies, who of late years have been imported thither. Besides, in searching among the ruins of the Grand Chimú's City, situated between Trujillo and the port of Huanchaco, some silver idols have been found, inscribed with very ancient Chinese characters. Some have likewise been dug up from the mounds in the Valley of Chincha Alta, 400 miles to the southward. I have examined these idols carefully. They bore marks of being very ancient. Two that were in my possession represented a man sitting cross-legged on

the back of a tortoise. The head was shaved, except the top, from which depended, hanging on the back, a lock of long hair braided Chinese fashion. In one of them the hands were wanting. This was placed between two pillars, surmounted by a perfect arch. The characters sculptured in alto relievo on the pillars were so time-worn and defaced as to be illegible. Not so with the other. The arms of the figure were extended; the hands rested on short pillars. There was no arch. And notwithstanding this relic was very much eaten by the rust and the salts contained in the earth, where for many centuries it had lain undisturbed, some signs were plainly visible on the pillars. They somewhat resembled the Chinese writing, but seemed somewhat different from those in use to-day.

“The finding of these relics was quite important, in my estimation. I set forth in search of a person who could interpret them for me and dispel my doubts. I knew a very intelligent Chinaman, acknowledged to be by his countrymen a gentleman of great literary attainments. He examined the queer object for a long time; looked at it on every side; then, without speaking a word, looked at me—looked at my relic again, his features betraying astonishment, nay veneration, not altogether free from awe. He was evidently overcome by a strange feeling. ‘Very old,’ said he at last. ‘These are very ancient characters, used in China thousands of years ago—before the invention of those now employed. They mean *Po-Hi*.’ This was sufficient. In remote times the Chinese had visited this country, and no doubt the present dwellers of Eten are some of their descendants.”

It is to be regretted that, in a matter of this importance, Dr. Le Plongeon was not able to give the opinion of some competent Chinese scholar. As it is, those inclined to be skeptical will question whether these supposed Chinese inscriptions have any higher value than the Phœnician tablets which from time to time are dug up in various parts of America.

NEW BOOKS.

ENGLISH MEN OF SCIENCE, by Francis Galton, F. R. S.—D. Appleton & Co., New York, 1875. “Popular Science Library.”

Among the most valuable results of the publication of Darwin's great work on the Origin of Species has been the production of works in which the same lines of reasoning have been applied to

other subjects besides Natural History. We need only instance the works of Buckle, Lubbock, Tylor, and that of Herbert Spencer on Sociology, now going through the press. Our appreciation of the value of these works does not necessarily imply an endorsement of them and their conclusions, but is based upon the fact of their calling forth such instructive discussions as have followed their publication.

Prominent among books of this class is the late work of De Candolle,¹ in which the recent history of scientific men was examined and commented upon. Men of science, as for the most part men of quiet and regular lives, were particularly fit subjects for such study; their lives being little disturbed by extraneous and ephemeral influences, but showing well the effect of deep reaching and permanent ones.

Galton, in continuing his studies upon the subject of hereditary descent,² was occupied at the time of the appearance of De Candolle's book upon studies of the same character but more extended scope, not limiting his examination to scientific men alone. Moved by some difference in the results obtained by De Candolle and those found by himself, he was led to make a special inquiry with regard to English men of science, in order to test the points still open to controversy.

This much of an explanation of the *raison d'être* of the present work of Galton is necessary, in order to estimate at their true value his conclusions.

The most prominent feature of this work is the limitation of the inquiry to contemporary English men of science. The author thus states his reasons for such limitation. "The advantages are great of confining the investigation to men of our own period and nation. Our knowledge of them is more complete, and where deficient, it may be supplemented by further inquiry. They are subject to a moderate range of those influences which have the largest disturbing power, and are therefore well fitted for statistical investigation. Lastly, the results we may obtain are of direct practical interest. The inquiry is a complicated one at the best; it is advantageous not to complicate further by dealing with notabilities whose histories are seldom autobiographical, never complete, and not always very accurate; and who lived under the varied and imperfectly appreciated conditions of European life, in several countries, at numerous periods during different centuries."

On the other hand Mr. Galton labors under some disadvantages in thus limiting his inquiry, and his generalizations cannot be as

¹ Histoire des Sciences et des Savants depuis deux Siecles. Par Alphonse de Candolle. Geneve, 1873.

² Hereditary Genius—An Inquiry into its Laws and Consequences. By Francis Galton, F. R. S. D. Appleton & Co. 1870.

wide or as entirely reliable as those of De Candolle. He alludes himself to some of them. "We must not forget³ that there are deep and obscure movements of national life which may quicken or depress the effective ability of the nation as a whole."

Again, according to his own showing, the present condition of English society is not favorable to the existence and development of pure Science. "It may be remarked,⁴ that the national condition most favorable to general efficiency is one of self-confidence and eager belief in the existence of great works capable of accomplishment. The opposite attitude is indifferentism, founded on sheer uncertainty of what is best to do, or on despair of being strong enough to achieve useful results..... A common effect of indifferentism is to dissipate the energy of the nation upon trifles; and this tendency seems to be a crying evil of the present day in our own country."

But the most unfavorable condition of all, as it seems to us, for the development of the true scientific man in England, is barely alluded to: "Educational monopolies,⁵ which offer numerous and great prizes for work of other descriptions, have caused enormous waste of scientific ability by inducing those who might have succeeded in science to spend their energies with small effect on uncongenial occupations." The educational monopolies here referred to are readily understood to be the Universities of Oxford and Cambridge, which, in proportion to their immense endowments, do so ridiculously little for science and scientific men. In this respect, they do not compare with the Scotch Universities; and as to any comparison, from a scientific point of view, with the European Universities, it is discreditable to the last degree.

In drawing a comparison between the results obtained by Galton in his inquiry with English men of science, and those of De Candolle in his more extended inquiry, let us not omit one great difference of opinion between the two. It is all-important, because they have discussed their respective results with special reference to these different views. Galton throughout this inquiry maintains the greater force of hereditary influences, as against education and surroundings, in the development of scientific men. De Candolle, on the other hand, has analyzed and classified numerous conditions favorable to the development of science, without considering the antecedents of the scientific men themselves.

However, in a previous article,⁶ Galton so qualifies and modifies his definition of what is to be understood by inheritance, that he

³ p. 170.

⁴ p. 171.

⁵ p. 167.

⁶ *Fortnightly Review*, March, 1873.

explains on this theory similarities of mental constitution which could be quite as readily attributed to imitation or similarity of surroundings. He justifies the latitude he takes in this definition by alluding to the impurity of the human breed as compared with the breeds of some animals, a point which appears to us to be well taken?

We have a very curious and rather surprising result obtained by considering the rank in life from which the scientific men have come. De Candolle had found, in a study of the lives of European scientific men in the last two centuries, that of the whole number, 41 per cent. were from the aristocratic or wealthy classes, 52 per cent. from the middle class, while only 7 per cent. were from the working classes.

Galton finds that of his list only 8.4 per cent. come from the aristocratic (noblemen and private gentlemen) classes, 88.6 per cent. came from the middle classes, and only 3 per cent. from the working classes. This is certainly a surprising result for England, where the aristocracy are wealthier and better educated than in any European country. It certainly seems to be an excellent commentary upon the appreciation of science by these privileged classes, and upon the state of the higher education in England. We would gladly note other interesting and valuable results obtained in this study by Mr. Galton, but cannot now take the space.

With the materials at his disposal, he has certainly made a very interesting book; but we think that the objections already stated to the limitation of his inquiry to English scientific men are very strong—much stronger than he seems willing to admit. When we consider that his own admissions show England to be in a very peculiar, not to say unfavorable, condition for the production of scientific men, it seems to us that so large a question as that of "nature or nurture" can hardly be settled definitely on such limited data. We hope that in the course of the author's study upon "hereditary genius" he may extend the field of his discussion to at least the limits taken by De Candolle. The book is exceedingly neat and attractive in appearance, and promises well for the new "Popular Science Library."

PICTURES OF LIFE IN CAMP AND FIELD. By Benjamin F. Taylor.
12 mo., pp. 272. Price \$1.50. Chicago: S. C. Griggs & Co.
1875.

This book is compiled from fragments of old letters written during the war to the *Chicago Evening Journal*, from the battle fields of the Army of the Cumberland, and as a book which does not aim to exalt any commander nor justify any theories of war, it should have a cheering effect upon those who lose heart in the thought that this money-getting and self-seeking age is lacking in fine and

noble elements of character. Little sketches like these remind us that a few years since the spirit and heroism of Greece and Rome sprang into life at our own hearth stones, and that North and South the men of the nineteenth century were in valor, purity of purpose and patient endurance not unworthy sons of those who gained and established the liberties of our country.

Mr. Taylor writes with enthusiasm and spirit, and some of his pictures have life and vigor, but the strength of his original conceptions is weakened by bad taste and the "deal of skimble-skamble stuff" presented makes one wish for Mr. Taylor a Phocion to prune his periods.

WE AND OUR NEIGHBORS; or The Records of an Unfashionable Street. (Sequel to *My Wife and I*.) A Novel. By Harriet Beecher Stowe. New York: J. B. Ford & Co.

This book brings us back to the circle of friends we met in *My Wife and I*, and is superior to the earlier work in its freedom from the extreme vulgarities there portrayed in the characters of "Modern Emancipated Women." These do not intrude upon the home circle, the story of whose daily life gives a charm to the unfashionable street of New York. As a story, it amounts to little; as a work of Mrs. Stowe's, it may, by her earlier admirers, be regretted as a descent, after her marvelous successes, into the common-place. Doubtless much of that success was owing to the fact that *Uncle Tom* touched in every heart a chord of sympathy for the oppressed, but still a work that reached the significant honor of being translated even into Asiatic tongues, must have had immense power, if only in that it so universally touched that chord. Intellectual strength and beauty of style are not to be found in this book, but one great merit it has: it is the record of quiet, unobtrusive, every-day lives, that by thoughtfulness make many share in the brightness of a little home in a back street. It shows the beauty and power of little acts of self-sacrifice and love, for which every life has ample opportunity, and which novelists are apt to overlook in straining after great deeds of heroism which can enter into but few lives.

THE MIRROR OF A MIND. A poem by Algernon Sydney Logan. 16 mo., gilt, \$1.50, New York: Published for the author by G. P. Putnam's Sons, 1875.

Whatever other divisions may be made of it, poetry is either subjective or objective. Byron, Shelley, Poe, De Musset, are of the former school, poets of the mind and passions, while Wordsworth, Goldsmith and Bryant are of the latter, poets of the affections and of nature. Of course, there are men who combine

both inspirations, and very few who are the pipes exclusively of one; but we consider those named as well-marked examples of two very different schools of poetry, suited to different minds. Men generally, especially young men, incline to subjective poetry because they are strong and capable of violent emotions, and because of its human element, while women, being contemplative and dependent, prefer descriptive, domestic, religious and well-ordered verse. Mr. Logan's poem, as the name indicates, is subjective, and we are glad to say it is subjective poetry of a very high order. The metre he has chosen is the Spenserian stanza of eight heroics followed by an alexandrine, and he has divided the poem into two cantos.

The man who would hold a mirror up to his mind must have some war within to make it worth reflecting. Too often the terrible litanies have been swelled by the strugglings of a spirit against its own crime, degeneracy, doubts or disappointments. Only these have driven it for expression into poetry. So that although we admit drunkenness, disappointment or doubt will not make poets, still we can point out many whose temples would never have felt the bays had they not first felt the throbs of excess of one kind or another. But we hasten to say, lest this introduction amuse or offend some one, that we do not attribute to licentious excesses the excellence of Mr. Logan's verses. On the contrary, if we see the reflection aright, the war within his mind is that it is an ambitious one disappointed with itself, elated with the consciousness of powers that it is depressed at not finding. He does not satisfy himself, and in willful isolation he finds nothing else to satisfy him. What convinces us that he is not, as might be inferred from his verse, the old swan singing his dying song, is that we have never heard any of it before, and it is altogether too good to have been smothered into old age.

The passions he holds up to view are not those of love, or riot, or misanthropy, or blasphemy, but it is the serious temper that has longed for something unattained and is dissatisfied. It sees death and wonders at it; it weighs life and finds it wanting; it looks at man and agrees that he is a worm; it turns in nature, not to daisies and daffodils, but to the immense planets and the distant stars, and the lawless wind, and the mysterious change from day to night and from season to season. These things awe him. They have nothing to do with man, and he forgets himself in their dumb grandeur. If he looks back upon his youth and finds it all wrong, or if he considers his present and finds it unsatisfactory and his future uncertain, he gets no relief, as the pastorals would, in fondling the ears of a calf; but if he goes to nature at all, pours forth his discontent only to the lonely and the vast.

Now in our nervous age this unhealthy temper is too common.

To be probing one's self and examining one's motives, and to allow others to have always and always less share in one's thoughts, is the most dangerous kind of selfishness. But not all morbid men have the redeeming feature of putting their irritabilities into such delightful shape as the author does. His mind, always weighing and weighing, has acquired an accurate habit, and he describes whatever pleases him to the life. We shall let him speak for himself in a few selections, though we assure those who have the opportunity that the best and pleasantest test will be to read the book through.

He will tell you of the utter uncertainty of love, and, on the other hand, of the certainty of a recoil in every exultation, with the air of a man who does not trust himself and has still less confidence in others.

XIII.

Towards love's sun doth bliss, that butterfly,
Soar on his fragile wing, nor knows the day
Which viewed his birth shall see his bright plumes lie
Dim in the dust; a single snow-flake may
Hurl him forever from his joyous way;
A single breath from out the northern heaven
Will quench with stormy clouds the autumnal ray;
And in an instant he is madly driven
Down on some chilly stream, with pinions wrenched and riven.

XIV.

When exultation bursts upon the soul,
Crushing the barriers reared by years and pride;
When the lip curls—eye flashes; when control
Reels backward tottering, and the long denied
And boastful tongue pours forth what we would hide;
When to thy fellow man thy heart grows warm,
Grasp thy mind's tiller, trust not to the tide!
Moments of perfect bliss e'er bode us harm—
The gentle sea-gull's coming tells the wildest storm.—*Canto I.*

But he was not always so wise, and he smiles to think how long it took him to find out that happiness is a martlet.

XIX.

But childhood waned, and as I older grew,
My glance was upward, though I knew not why;
Above me Happiness the martlet flew;
I marked her pathway through the stormy sky,
Enraptured with her pinions' gorgeous dye;
And oft she faded from my straining sight,
Oft in her wavering course swept swiftly nigh—
I knew not she was footless, and her flight
Eternal, and I deemed she might, she could alight!—*Canto I.*

Yet he half suspects that this temper is not altogether natural to him, and stops to resent the selfish indifference of those who in his youth took no pains to encourage him, and the petty malice

of those who were glad to tell him that his powers were very ordinary.

XX.

Power, Envy, Hatred, sent their shadowy brood—
 Words, gestures, looks, the half indifferent air,
 Oppression unavowed, yet understood,
 Assent equivocal, and praise most rare,
 The hint that all men all your talents share,
 The boundless praise of others your own knoll,
 Like phantom birds with brazen beaks, these tear
 The stoutest heart, and check the boldest soul,
 And with their poisoned wings blot out the distant goal.—*Canto I.*

Of course autumn is the favorite season of such a man, and a very dignified stanza he gives him.

XXIV.

For now sad autumn with his plaintive flute
 Upon the hill-tops mournful ditties plays;
 Tears doth he shed which stain his russet suit,
 Weeping the waste which yet he never stays,—
 Save when at times his march he still delays
 And towards the parted summer turns him round,
 With melancholy smile and longing gaze;
 With red and yellow leaves his head is crowned,
 And ever as he walks some rustle to the ground.—*Canto I.*

And here are five lines striking enough to make a sportsman hear his hound.

Dead leaves in heaps lie stiffening all around;
 Mists rise where'er we gaze with motion slow:
 While the faint warble of the distant hound
 Lingers upon the air with billowy flow,
 Soft, sweet, yet ominous—unfeeling, though so low.—XVII., *Canto I.*

The spot he seeks out is like this.

XI.

There is a spot where oft my steps are bent,
 Where giant rocks to press the earth are seen
 With the deep, heavy, lost abandonment
 Of an eternal slumber; and they lean,
 And seem as nodding o'er the flickering sheen
 Of a slight rill, which hastens on below
 'Twixt mossy stones; while many an evergreen
 Stretches his muffled arms with movements slow,
 As if to stay the stream, and hush its boisterous flow.—*Canto II.*

Why will mighty death condescend to touch a thing like man?

XVIII.

Beholding man, as man around we see,
 We wonder Death will touch so mean a thing—
 That they who never saw reality,
 Who o'er pure nature tawdry drapings fling,

Shall e'er behold the universal king,
 The sole controller of life's hidden fire—
 From the cupped flower, the dimples of the spring,
 To systems whom no weight of time can tire
 Who yet beneath his frown pale, sicken, faint, expire.—*Canto II.*

These are lyrics of the highest order both in conception and in versification; and the question left on our mind is, whether, if they are received as favorably as we think they deserve to be, we shall have more in a happier strain, or whether like Alexander's soldier, who ceased to fight when his disease was cured, Mr. Logan will give us no more at all.

THE LIFE AND GROWTH OF LANGUAGE. *An Outline of Linguistic Science.* By William D. Whitney. New York: Appleton & Co., 1875. Sixteenth volume of the International Series.

Much of the interest which Professor Whitney's contributions to the literature on language inspire is due to his sober and lucid method of dealing with linguistic problems. The present work, which forms a volume of the International Scientific Series, has the merit of clearness and unmistakable directness in a high degree, and answers probably better than any other book as an introduction to the study of linguistic science. Not as if it were a mere guide-book for beginners. While intelligible and attractive to a large circle of persons of general information, its discussions equally concern the scholar and philosopher. For it so happens that while on the field of comparative philology brilliant and lasting results have rewarded the labor of eminent scholars, the fundamental questions on the nature, origin and growth of language appear to be as much unsettled as when Plato inquired whether words were given to things *ἔσσι* or *θῆσσι*. Professor Whitney firmly maintains the stand previously taken, that "every word handed down in every human language is an arbitrary and conventional sign: arbitrary, because any one of the thousand other words current among men, or of the tens of thousands which might be fabricated, could have been equally well learned and applied to this particular purpose; conventional, because the reason of the use of this rather than another lies solely in the fact that it is already used in the community to which the speaker belongs."

According to the plan of the work, attention is first directed to the manner in which existing languages are acquired and transmitted, how they act upon the mind, what advantages they supply, what constraints they impose. The larger portion of the book is devoted to the historical aspect of language, its development, the action of conservative and alterative forces upon it; then follows a synopsis of the languages spoken; and the last chap-

ters contain what we might call the philosophy of language, views concerning its nature and origin.

In opposition to the lofty transcendentalism of other writers, Professor Whitney upholds a very plain—as he calls it at another place, iconoclastic—theory on the subject. Language is not identical with thought, nor is it the immediate exertion of the thinking faculty; it is a system of audible signs, originally suggested and mainly used for communication of one human being with others. Its history is analogous to the history of an institution (to which it may be fitly compared), to the history of mechanics and other outcrops of human culture. Language is an acquisition of man not shared by animals, but in this respect only another evidence of his superior powers, as is tool-making. Its origin must be sought in man's desire to signify to others some impression of his own. "Whatever offered itself as the most feasible means of arriving at mutual understanding would be soonest turned to account. We have regarded the reproduction, with intent to signify something, of the natural tones and cries, as the positively earliest speech; but this would so immediately and certainly come to be combined with imitative and onomatopoeic utterances, that the distinction in time between the two is rather theoretical than actual." "Mutual intelligence being aimed at, and audible utterance the means employed, audible sounds will be the matter most readily represented and conveyed."

In further elucidating the view that imitation of sounds furnished many of the earliest elements of speech, Prof. Whitney continues: "The scope of the imitative principle is by no means restricted to the sounds which occur in nature, although these are the most obvious and easiest subjects of significative reproduction. What it is may be seen in part from the range of onomatopoeic words in known languages. There is a figurative use of imitation whereby rapid, slow, abrupt, repetitive motions are capable of being signified by combinations of sounds which make something such an impression on the mind through the ear as the motions in question do through the eye."

Curious misconceptions arise not in this branch of inquiry only from our habit of personifying abstract notions and assigning to them certain qualities, powers, tendencies, etc. This is well enough if understood as an abbreviated form of statement, but not unfrequently the figurative mode of expression misleads and deceives. "There are those still," Prof. W. says, "who hold that words get themselves attributed to things by a kind of mysterious, natural process, in which men have no part; that there are organic forces in speech itself, which, by fermentation, or digestion, or crystallization, or something of the sort, produce new material and alter old." In opposition to such strange notions it becomes necessary to insist on a truism like this: "That a word can be

altered only by passing from mouth to mouth, the reproduction not being exact." The apparent difficulty that no individual has the power of effecting a change in established language, is really not in the way at all, as such changes only become impressed on language, to which the whole speaking community, for some reason or other, is inclining. In this connection Prof. Whitney remarks: "It is not necessary that every single change should start from a single point. There are some towards which the general mind so distinctly inclines, which lie so closely outside of and within reach from the present boundaries of usage that they are made independently by many persons in many places, and thus have a variety of starting-points, from which they strive after currency." How these slight, at the beginning almost unnoticed, variations sum up in course of time is well known. The aggregate of such changes has turned the Anglo-Saxon into English, the Latin into the Romanic languages, the Indo-European into the numerous progeny of languages spoken in Europe and Western Asia.

Throughout the whole book, the sensible plan has been followed of drawing as much as possible upon the English for the purpose of illustration; apart from its being to all readers the most familiar language, there is probably in the range of languages none so well suited to exhibit the normal and abnormal phenomena of speech, the fitful career of words, the regular and adventitious resources of the vocabulary, and the pathology of grammar.

The history of words with regard to their change of meaning, to which one of the chapters is devoted, is a theme of exhaustless interest. It is intimately connected with the history of civilization, and the mental habits of our race. But the direction in which such changes move can be pointed out only in a general way. Professor Whitney's remarks on the subject, though offering nothing new, are well-considered and suggestive.

The sixth chapter speaks of the loss, and the seventh of the acquisition of words and forms. The latter shows how the vocabulary keeps even pace with the growth of knowledge and ideas, though debarred from creating new roots. The readiest expedient is to crowd a new meaning into a word that is sufficiently patient or pliable. Foreign words and compounds furnish another supply. Such compounds are often condensed into seemingly simple words, or they receive a conventional meaning, not implied in the component parts. The author remarks, talking of compounds: "Though in English they are far from being as numerous as in German, our speech is pretty full of them." We venture to say *en passant* that the English would be credited with a much larger number of compounds, were it not for the prevailing custom of separating so many of them into two words, and

calling the former of them, absurdly, an adjective. *Sea water, sewing machine, iron furnace*, and a thousand others, are really compound words.

How dialectic difference must arise within the limits of a single language, how under favoring circumstances, such as segregation or political independence, these differences widen and constitute separate languages, on what ground the languages of the Indo-European stock must be taken as offshoots of one parent speech, forms the subject of the ninth chapter. The seven branches of the Indo-European are briefly treated in the tenth, which also furnishes a constructive theory of the gradual formation and development of language, the Indo-European being taken as type.

With regard to grammatical gender, which forms a problem in the history of language, Prof. Whitney appears to abide by the common impression, that it reflected at the outset the distinction of natural sex. "Its foundation must, of course, lie in the distinction of sex in those creatures which have conspicuous sex." This view, almost forced into us by our grammatical training, nevertheless is beset with hopeless difficulties. The unscrupulous distribution of sexless nouns (including the numerous class of abstracts) over all three genders, is not a license or an abuse that has crept into language; the oldest stages of our speech exhibit this apparent incongruity in fullest extent. All attempts to widen by symbolism the spheres of male and female, so as to make them correspond to the grammatical masculine and feminine, are simply failures. Latin, Greek, Sanscrit, show that terminations or suffixes have more to do with determining the gender of nouns not denoting persons than their meaning has. What is there so radically different in *motus* and *motio* that one should have the gender set apart for males, and the other that for females? Again, it is impossible to believe that nouns had originally, *in statu nascente*, as it were, the distinction of gender attached to them. There could have been no gender prior to the period of suffixes, and it may not have become a conscious feature of language until the agreement of pronouns and adjectives with nouns called it into play. Upon what ground the three classes of nouns, which we now call masculine, feminine and neuter, were instituted, we do not venture to say; but that the dividing lines had any relation to sex appears to be only a time-honored prejudice. Nouns denoting males and females drifted into two of the classes; but being much outnumbered by other words that kept them company, could not have constituted the leading feature of the respective genders.

The 12th chapter takes up the families of languages not of Indo-European stock, describing in brief outline their structure, and calling attention to problems (such as the possible connection

between Semitic and Indo-European languages) that await their solution. The concluding chapters return to questions of a general nature, which have already been alluded to in the beginning of these remarks.

As a matter of course, a volume of not much more than 300 pages cannot do equal justice to the copious material which Prof. Whitney has undertaken to exhibit in a popular form. The work is not so much instructive by detailed information as by inculcating general principles. Upon some of his points the author seems to dwell with almost tiresome explicitness. As his views have of late been severely impugned, he may have thought proper to fortify his position. But all controversy is kept out of sight; neither the sarcastic petulance of Max Müller nor the rudeness of Steinthal has disturbed the calm and entirely objective tone of Prof. Whitney's lucubrations.

BOOKS RECEIVED.

Elena, an Italian Tale. By L. M. Comyn, author of "Atherstone Priory." 16mo., paper, 75 cts. Boston: Estes & Lauriat, 1875.

Stretton, a Novel. By Henry Kingsley. Jettatrice: or, The Veil Withdrawn By Madame Augustus Craven. Uniform Series, 75 cents each. Boston: Estes & Lauriat.

Half-hour Recreations in Natural History. Half-hours with Insects. Insects of the Forest; also, Half-hour Recreations in Popular Science. The Ice Age in Britain, and Causes of the Degeneracy of the Teeth. Boston: Estes & Lauriat.

Aunt Margaret's Trouble. By Miss Dickens. Complete in one volume, 25 cents. T. B. Peterson & Bro., 306 Chestnut St., Philadelphia.

A Summer Parish: Sabbath Discourses and Morning Services of Prayer at the Twin Mountain House, "White Mountains," N. H. By Henry Ward Beecher. Pp. 231, price \$1.50. J. B. Ford & Co., Publishers, New York. [J. B. Lippincott.]

The Abbé Tigrane: *Candidate for the Papal Chair*. From the French of Ferdinand Fabre. Translated by Rev. Leonard Woolsey Bacon. 12mo., cloth, pp. 272, price \$1.50. J. B. Ford & Co., New York. [J. B. Lippincott.]

Queen Mary: a Drama. By Alfred Tennyson. [Author's edition, from advanced sheets.] 16mo., pp. 284, \$1.50. J. R. Osgood & Co., Boston. [Porter & Coates.]

The Character and Logical Methods of Political Economy. By J. E. Cairns, LL.D. 12mo., cloth, \$1.50. New York: Harper & Bro. [J. B. Lippincott.]

Afraja: or Life and Love in Norway. From the German of Theodore Mügge. By Edward Joy Morris, late U. S. Minister to Turkey. (International Series.) Philadelphia: Messrs. Porter & Coates.

The Better Self: Essays for Home-life. By J. Hain Friswell, Author of "The Gentle Life." Crn. 8vo., cloth, pp. 300, price \$1.75. Philadelphia: Porter & Coates.

Common Sense in the Household; a Manual of Practical Housewifery. By Marian Harland. 12mo., cloth, pp. 556, price \$1.75. New York: Scribner, Armstrong & Co., 1875.

Breakfast, Luncheon and Tea. By Marian Harland. (Common Sense in the Household Series.) Pp. 458, price \$1.75. Scribner, Armstrong & Co., 1875.

Manual of Mythology: Greek and Roman, Norse and Old German, Hindoo and Egyptian Mythology. By Alexander S. Murray. Reprinted from the second revised London edition. With 45 plates on tinted paper, representing more than 90 mythological subjects. Crn. 8vo., pp. 368, price \$2.75. Messrs. Scribner, Armstrong & Co., New York.

Principia: or Basis of Social Science. Being a survey of the subject from the moral and theological, yet liberal and progressive standpoint. By R. J. Wright. 8vo., pp. 524, price \$3.50. Messrs. J. B. Lippincott & Co., Philadelphia.

Illustrated Homes: a series of papers describing Real Houses and Real People. By E. C. Gardner. With illustrations. Sqr. 16mo., \$2.00. Boston: J. R. Osgood & Co., 1875. [Messrs. Porter & Coates.]

THE
PENN MONTHLY.

SEPTEMBER, 1875.

THE MONTH.

THE war in the English House of Commons has come to a satisfactory end. Mr. Plimsoll is a worthy man, who has raised himself from small beginnings by dint of industry and force, and like all untrained men who have hobbies, he sometimes rides his a little roughly. In this case, however, he had much justification. It seems not easy, at first, to imagine that the evil which he has made it his business to correct is widespread, in a country like England, which is so often sneering at others (and notably at the United States) for what it considers a national trait—the disregard of human life. But the statistics which Mr. Plimsoll has produced during his campaigns against the merchant ship-owners reveal a condition of things which is absolutely appalling. The rotten vessels which are annually sent to sea, freighted heavily and manned with human lives, are to be numbered by the thousands. Nor is ignorance of their condition to be pleaded by their owners. A system of fraud against the insurance companies has been organized and carried into effect. Unseaworthy vessels are insured at the value of new ships and sent to sea with the hidden expectation that they will not return—a hope which is half the time fulfilled. Success in this infamous course has bred a feeling of security among the ship-owners which has led to the most barefaced disregard both of humanity and the

law. The recent trial of one of them brought to light a correspondence in which it was made evident that the writers had knowingly re-insured, loaded and sent to sea a rotten ship, which foundered, as they expected, with all on board; and many similar incidents seem to justify Mr. Plimsoll in his application, to the owners of such vessels, of the word "villains." Several years of what Mr. Wendell Phillips considers so valuable, and calls "agitation," have enabled the enthusiastic Plimsoll to educate the public mind and arouse public sentiment to such a pitch that prompt action upon the subject has now become a necessity, and the decision of Mr. Disraeli to ignore the "shipping bill" seems to demonstrate, says one of the least sentimental of English journals, that he is no longer fit to govern a people whose views he so little understands and whose wishes he so cavalierly disregards. But to Mr. Plimsoll this postponement was more than a governmental blunder; it was more even than the postponement of a measure needed to save thousands of worthy lives; it was the triumph over him of his enemies, the ship-owners. This was too much for him to bear, and he broke out in a speech which almost frightened the House into an apoplexy. It has always been quite the thing, in the House of Commons, for the majority, sitting in rows with their hats on, to groan and shout, indulge in cat-calls and crowing, and continuous shouts of "gabble, gabble," whenever it became necessary, or agreeable, to drown the voice of an unpopular member or prevent the views of the majority from being heard; but it is quite unprecedented for one of the latter to shake his fist at the government benches, hurl epithets at the majority, and describe gentlemen of the House as "murderers" and "villains." The House was, therefore, enraged at Mr. Plimsoll's conduct, and spent the rest of the night in debating what to do about it. A few hours cooled the excitement, and wiser heads than Mr. Plimsoll's or Mr. Disraeli's patched up the thing. A compromise, which is a gain for Mr. Plimsoll's side, has been the result, and the House may remain long enough in session to save the lives of thousands of English sailors, even at the risk of prolonging till after the 12th of August those of thousands of Scottish grouse.

The incident is amusing enough as an illustration of the fact that scenes of disorder may take place at Westminster, as well as at Washington. In fact, the less that is said by any one of us

about our neighbor's parliamentary behavior, the better. English and French journals have long sneered at the disorderly conduct of American Congresses, but the impartial stranger can hardly go into the House of Commons without being struck by the want of decorum and the constant interruptions which greet an unpopular or awkward speaker—none of which he sees at Washington—and the assembly at Versailles, from all accounts, resembles the quarrelling-room of an asylum for half-grown children, many of whom are insane, and all of whom are spoiled.

Six hundred and fifty Mayors, Prefects, Syndics and other municipal things, must have made a gorgeous show at Guildhall, on the 29th of July. The United States had, we believe, no representative at the table, but the Mayor of Philadelphia (having very wisely reconsidered his first determination to represent the "Centennial City" and its superiority in all things at the table of the Lord Mayor of London) did what was far better and safer so far as the Centennial is concerned—sent a dispatch inviting the company to Philadelphia next year. Doubtless, Mr. Stokely would have been well and warmly received as the chief magistrate of Philadelphia and the chosen representative of a people anxious to exhibit itself to wondering mankind, but the gentleman, in whose congenial companionship he would have made the journey, would perhaps have illustrated, somewhat too vividly, certain features of our growth and progress during the century, which might as well be observed by foreigners next year when there may be other things for them to see.

THE O'Connell demonstration was evidently mismanaged. Instead of making the occasion one in which all Irishmen, Northern or Southern, Protestant or Catholic, could heartily join, those who took charge of it sought to narrow it into an ultramontane festival. O'Connell, of all men, was to be honored otherwise. He said, himself, that he would never take his politics from the Pope; nor did he ever. He loved all Ireland and lived for his whole country. He was a large man in all things; and to seize his hundredth birthday for a demonstration in which his patriotic Protestant countrymen could not join, was to do his memory and his

name injustice. And more than this it was a blunder, of the kind which Catholic politicians are apt to make. Half the time, in Protestant countries, the question of faith would never be thought of, in political matters, and still less frequently rise up to divide men or parties; but it is a string upon which the ultramontane is always harping, and usually even in Catholic countries, with injury to himself and the cause he serves. In Dublin, on the 6th, the dissatisfaction culminated in disorder. The Fenian Amnesty Association and the Home Rulers, angered at their total exclusion from the proceedings, and perhaps, *more Hibernico*, secretly rejoicing at the fine chance for a row, insisted on seizing the head of the procession, and, finally, surrounding the O'Connell monument, refused to let the Lord Mayor read the oration which Lord O'Hagen had prepared. Dr. Isaac Butt, the Home Rule leader, was called out and made a speech, as did one or two others, and the rout of the officials was complete. In the evening at the banquet there was still more trouble. When a toast to the "Legislative Independence of Ireland" was proposed, the announced speaker was not suffered to proceed, and when Dr. Butt was again called for, the lights were put out and the guests dispersed in confusion. It is much to be lamented that the occasion should have been marked by riot and disturbance. This is certainly not the right way to convince the world that Ireland is fit either for Home Rule, or Self Government. Even Legislative Independence would seem to be more than a people were fit for whose quarrels and feuds are so bitter and lasting. Unjust as have been many of the measures of the English government, it is such things as these that seem to justify them to the world, as with us the disorders in the South are made a constant excuse for Force Bills and other acts of dangerous tendency and doubtful constitutionality.

THE whole world laments Hans Christian Andersen. Always a poet, whether he wrote in prose or verse, his exquisite writings have passed into the literature of every European tongue. He dwelt on the borders of Elfland, in close communion with the world of legends. To him its spirits were visible; for his ear, at least, they had a tongue, and he delighted to be their chosen interpreter, and paint, with his powerful pencil, their shadowy

portraits. He seemed to combine the Northern with the Southern mind. No imagination ever painted the beauties of Fairy-land more charmingly than his, and no one wrote more sweetly of sunny Italy than did this man, born and brought up beneath the cloudy Danish sky. His heart was cheerful and his writings healthful and harmonious. There was nothing morbid about him, and even his melancholy was of the cheerful, autumnal kind. He was a warm-hearted, genial man, as his books reveal,—one who loved his fellows; and his name, among those of the story tellers who have blessed the earth and won the affection of mankind, leads all the rest.

WHAT a different character was that of him who died, about the same time, in Eastern Tennessee! A rough, hard man, utterly without imagination, to whom life was a severe struggle with adversity, and success to be won in spite of fate, Andrew Johnson was a remarkable product of the conditions out of which he grew. He had no tact and little judgment, but an innate honesty kept him generally in the right direction, and served, like a woman's instinct, to supply the lack of higher powers. His will amounted to obstinacy, but none could doubt that he was sincere. He was a contradiction and never did what was expected of him. Even his death took all men by surprise. The stormy period during which he sat in the Presidential chair had brought out many of the worst features of his character and developed his weaknesses, but his honest pluck had won back for him in the past six years much of the regard which he once seemed to have forfeited forever. He was fortunate in the period of his death. There was every chance that he would have done no great things in the Senate, but many little ones, and he was still in the flush of that popularity which the mere strangeness of his reappearance in public life, and perhaps the secret feeling that seven years ago they had "overdone the thing," had awakened among his fickle countrymen. His history was a romance, and it was complete; it was time for him at last to find shelter from so many storms and rest after so much labor.

THE failure of Duncan, Sherman & Co. has not unsettled credit, as many wise men feared at first it would. After three days of

excitement, things went on just the same as ever, and no ripple marked the spot where the great ship had gone down. To the world in general the failure was a surprise. The firm's name has stood very high, and there was at the outset, when the news first spread abroad, that despairing feeling expressed in the question, "whom can we trust now-a-days?" This was the chief danger to be feared—the undermining of confidence, that "plant of slow growth;" but it seems that for some years the credit of Duncan, Sherman & Co. has been thought doubtful by many shrewd and careful men. The fall of the house is the same story told over again for the nine hundred and ninety-ninth time:—A house well founded, which might have made a fortune in banking by steadily confining itself to a legitimate business, and remaining contented to grow rich slowly, fallen to pieces from disastrous speculations in the effort to make money fast. These are the spectacles which make one doubt whether there is for nine-tenths of mankind such a thing as teaching by examples.

THE past thirty days have brought about a complete change in the weather, and the drought has given place to heavy and continued rains. The recurrence of the floods which have again for the hundredth time devastated the valley of the Ohio and those of its tributaries, and caused the Mississippi once more to prove the insufficiency of its levees, renews the discussion of the question whether engineering can do anything to avert or mitigate such disasters. The bed of the Mississippi might be relieved by the formation of artificial lakes, but skillful engineers have pronounced the opinion that nothing but many artificial mouths can be of much service in the case of floods. The problem is in fact new and unsolved; for the country which the Mississippi and its feeders drains is so extensive, that the rules which apply to other rivers are at fault with regard to it. But, at the same time, it is equally certain that something ought to be done.

GENERAL GRANT'S Commission of Inquiry as to the Indian frauds, might take a lesson from the first report of that which Governor Tilden appointed last spring to investigate those in the Canal Department. Mr. Bigelow and his associates have no hesitation in telling frankly what they have found out. They call a

spade a spade, and a fraud a fraud ; nor do they hesitate to put the blame where it belongs. The Indian Commissioners appointed by the President, or to speak more correctly, by the Secretary of the Interior, have reached Cheyenne. It is reported that upon the arrival of the Commissioners at that cheerful place, Dr. Saville, the implicated agent, "took Gen. Fletcher aside, and, after endeavoring to learn from him the scope of the investigation, offered his assistance to the gentlemen in their investigations." The Doctor is evidently a frank and open-hearted man, less cautious, perhaps, than the Secretary and Chief Commissioner, who, according to Prof. Marsh, sought first to find out what he knew, and desired to have examined, before they offered their valuable aid to further his inquiries.

But Saville is on his native heath and has much at stake. Such experienced public servants as he are not likely, in these times, to come to grief through indiscreetly helping investigating committees. General Grant's course all through these matters has been a curious one. He started with an effort, doubtless sincere, to reform the Indian Department. His appointees were excellent men. And yet when they resigned in a body because, as they said, the Secretary of the Interior not only failed to recommend the changes they desired and the legislation they thought necessary, but was in the habit of awarding contracts to the persons to whom the Commissioners refused them, and believed to be dishonest, the President let them all go and retained the Secretary. From that time to this things have been growing worse, and fraud in the Indian agencies more flagrant. Professor Marsh's conduct has been admirable. He has not sought the quarrel or desired the contest. To him it is especially trying because he will make enemies of the agents and others, whom he must always depend upon to help him in his search for spoils; but he has honorably fulfilled a promise made to the Indians, and "being in," he is so conducting himself, as Polonius advises, that the other side "may beware" of him. It is a source of satisfaction that, in this case, the officials who are implicated are confronted by one who has nothing to gain from them and cannot be frightened into silence—who does not care a straw whether they remain in office or go out of it, but simply that the truth be made patent and the right be done. They have not been accustomed to this

kind of antagonist. Of course it would be unjust to Mr. Delano and the Rev. Mr. Smith to pass judgment upon them before the verdict, and it may very properly be wished that they will be enabled to clear their skirts of any connection with the frauds which have disgraced the service, for their conviction will be a national mortification. It might have been a national disgrace if, as has been usual in previous administrations, the public sentiment had had anything to do with their appointment; for a Secretary of the Interior convicted of fraud is worse than an Attorney General suspected, or a Secretary of the Treasury laughed out of office for incompetency. President Grant, however, alone, is responsible for the members of his cabinet. No public sentiment suggested their names, for until the appointment of the majority it had never heard them. His, therefore, is the responsibility, if they prove unworthy, and, when any one of them is acquitted of incapacity or dishonesty, his be the glory, too.

THE Centennial Exposition has now progressed so far that one may see its whole proportions and judge for himself of its prospects for success. The Main Building is now half done—the Machinery Hall will be completed by October, the Horticultural and Agricultural Halls soon after, and the Permanent Building by the first of January. In the park around the main structures several States will erect pavilions, the General Government a building, England a large cottage of brick and wood, Japan a village, Egypt a street in imitation of one in Cairo, Switzerland a chalet, and so forth. On the whole, there will be seventy-five acres under roof. It is only three years since the Centennial project took shape. Less than a year ago the buildings had not been begun, the plans for the Art Gallery having been drawn after July 1st, 1874. During thirty-six or forty months the gigantic scheme has been organized, nearly six millions of dollars have been collected, and the structures more than half finished. There can be now no doubt that had the times remained as they were in 1872-3, more than enough money could have been speedily raised; but the accomplishment of so much, in the face of the panic and the hard times, is remarkable. The extent of the undertaking may be measured not only by the seventy-five acres of buildings and the 450 acres of park, but also by the fact that the average dis-

tance between the buildings will be 550 feet, and the railroad track inside the grounds three miles and a half in length. Everything that can be done to make the exhibition a success is being done. The railroads which converge from all points of the compass will have depots close to the entrances of the grounds. Once in the city, the stranger who does not alight directly at the exhibition will find ten lines of horse cars and four steam roads, by means of which nearly seventy-five thousand people an hour can be carried to or from the grounds, and the innumerable steamboats upon the Schuylkill can add greatly to that number. The accommodation of strangers, so long a debated question, will be satisfactorily arranged, and the city promises to turn itself into a huge dormitory for the nonce. The thousands of small houses in the neighborhood of the exhibition and in the suburbs will become colonies for the numerous hotels; and the huge caravanserai, that is soon to be built on Elm Avenue opposite the exhibition, will accommodate three thousand lodgers. On the whole, no stone is left unturned, and it is to be regretted that the municipal government is not in the hands of those who have either the breadth of view or the honesty of character or purpose to prepare Philadelphia herself to receive the visiting world in fitting dress. Our streets are badly paved and drained, our reservoirs unfinished, and a thousand things that might and ought to have been done are left unattempted. But whatever the Centennial may do to teach foreigners what we are, it will, let us hope, instruct us in many things; and, perhaps, if we cannot have a reconstruction and purification of our city government before the Centennial we may have it afterwards.

EDUCATIONAL REFORMERS.—II.

THE HAMILTONIAN SYSTEM OF TEACHING LANGUAGES.

AFTER Lancaster, the next English theorist deserving attention is Mr. James Hamilton, author or reviser of what is known as the Hamiltonian method of teaching foreign languages. In his case also the English tendency to spend one's strength on the mere details of educational method—a tendency already illustrated by Milton and Locke—is very marked.

The arguments by which he would prove interlineal translations the best books for learning a language, seem to us to rest on a very shallow physiological basis. The object of teaching at language is not merely that the student may know the language and be able to read books written in it. It is also to impart a certain discipline to the judgment in the selection of the most probable sense of each single word and of the whole passage before him. The Hamiltonian method robs the student of all such discipline. And even as regards the lesser end—the bare knowledge of the language—we all know how much longer a piece of knowledge which has been gained with difficulty clings to the mind, than where it was obtained without any special outlay of mental energy.

Translations like those that Hamilton proposed have their places in education. Where the student is reading a book by the ordinary method, he will find it very useful to take up an interlineal and literal translation of some other book of the same general character, and reading it freely and quickly. The present writer found this of great use, and has recommended it to others, who have used it with equal profit. But nothing can supersede the good old method of grammar and dictionary, by which all good scholars were, and ever will be grounded.—ED.

The *Edinburgh Review*, in speaking of the Hamiltonian plan of teaching languages by literal interlineal translations, says:

“Whether Mr. Hamilton is or is not the inventor of the system which bears his name, and what his claims to originality may be, are questions of second-rate importance. That man who is so deeply impressed with the importance of a discovery that he will take no denial, but at the risk of fortune and fame pushes through

all opposition, determined it shall not perish for want of a trial, and makes it a success, is entitled to the credit of having appreciated its value and made it his own.

"If the system is just, it is sad trifling to deny Mr. Hamilton's claim to originality, by stating that Locke recommended inter-linear translations, or that others advised the same thing a century earlier. They have all said it so feebly, that their observations have passed *sub silentio*, and if Mr. Hamilton succeeds in being heard and followed, to him be the glory—because from him have proceeded the utility and the advantage. One of the first principles of Mr. Hamilton is to introduce very strict literal inter-linear translations as aids to lexicons and dictionaries, and to make such use of these translations that the lexicon and dictionary will be for a long time little required.

"A literal translation, or any translation of a school book, is [June, 1826] a contraband article in English schools, which a school-master would instantly seize. They are justly objected to when they are paraphrases and not translations. It is impossible from a paraphrase, or a very loose translation, to make any useful progress—they retard rather than accelerate a knowledge of the language to be acquired, and are the principal causes of the discredit into which translations have been brought, as instruments of education."

Translations on the Hamiltonian system must not be confounded with translations made according to Locke, Clarke, Sterling, or even according to French writers, who have made what have been, and are yet sometimes, called *literal* and *interlineal* translations. The latter are *interlineal*, but not *literal*. "These," says Hamilton, "that I have published are only and truly *literal*; that is to say, that every word is in English by a corresponding part of speech, that the grammatical analysis is never departed from; that the case of every noun, pronoun, adjective or participle, and the mood, tense, or person of every verb, are accurately pointed out by appropriate and unchanging signs, so that a grammarian not understanding one word of Italian would, on reading any part of the translation, be able to parse it." In the translations above alluded to an attempt is made to preserve the correctness of the language into which the different works are translated, but the desire to conciliate the correctness with a *literal* translation has only produced a barbarous and uncouth idiom, while it deceives the unlearned pupil by a false and incorrect translation. Such translation may give an idea of what is in the book translated,

but will not assist, or at least very little, in enabling the pupil to make out the *exact meaning of each word*, which is the chief object of the Hamiltonian translation. The reader will understand this better by an illustration. A gentleman has lately given an interlinear translation of Juvenal, beginning with the words *semper ego*, which he joins and translates, "shall I always be." In the Latin words there is nothing about "shall be." The whole translation is on the same plan, not one line, or, we may say, there is scarcely one word on which the pupil can rely as the exact equivalent in English of the Latin word above it.

As the object of the author has been that the pupil should know every word, he has uniformly given it one precise meaning which it has in our language, sacrificing everywhere the beauty, the idiom and the correctness of the English language to the original, in order to show the idiom, phraseology and picture of that original as in a glass. So far is this carried, that when the English language can express the precise meaning of the Italian phrase only by a barbarism, this barbarism is employed without scruple, as thus:

E la luce splende tra le tenebre e
 And the light shines among the darkneses and
 le tenebre hanno non amnessa la
 the darkneses have not admitted her

"Here the word *tenebre* being plural, if you translate it darkness, you not only give a false translation of the word itself, which is used by the Italians in the plural number, but what is much more important, you lead the pupil into an error about its government, its being the nominative case to *hanno*, which is the third person plural; and it is therefore not translated darkness, but darkneses."

"The recurrence to a translation," says the *Edinburgh Review*, "is treated in our schools as a species of imbecility or meanness; just as if there was any other dignity here than *utility*, any other object in learning languages than to turn something you do not understand into something you do understand; as if that was not the best method which effected the object in the shortest and simplest manner. We wish to compare the plan of finding the English word, in such a literal translation as the Hamiltonian, to that of finding it in dictionaries, or of taking the grammar at an advanced period of knowledge in the language, rather than at the beginning.

"Every one will admit that of all disgusting labors of life, the labor of lexicon and dictionary is the most intolerable. Nor is there a greater object of compassion than a fine boy, full of

animal spirits, set down on a bright, sunny day, with a heap of unknown words before him, to be turned into English before supper, by the help of a ponderous dictionary alone. The object of looking into a dictionary can only be to exchange an unknown sound for one that is known. Now, it seems indisputable, that the sooner this exchange is made the better. The greater number of such exchanges which can be made in a given time, the greater is the progress—the more abundant the *copia verborum* obtained by the scholar. The loss of time in the merely mechanical part of the old plan in finding the word is immense: we say nothing at present of the time employed in thinking of the meaning of the word when he has found it.

“In trying to find the word, we will suppose, after running his finger down many columns, and after many sighs and groans, at last the word is found. We presume the little fellow, working in the true orthodox manner, without any translation, he is in pursuit of the word ‘*Ballo* ;’ and after a long chase seizes it as greedily as a bailiff seizes a fugitive he is pursuing. But alas! the vanity of human wishes! the never sufficiently to be pitied stripping has scarcely congratulated himself upon his success when he finds that *Ballo*, in the lexicon, has seventeen different words given, out of which he has to select but one as the meaning he needs.

“The interlineal, literal translation, of course, spares the trouble and time of this mechanical labor. Immediately under the foreign word is placed the English word. The unknown sound is instantly changed for one that is known, and so painful is this labor to many boys that it forms an insuperable obstacle to their progress. Words in their origin have a natural or primary sense. The accidental association of the people who use it afterwards gives a great number of secondary meanings. In some words, the primary meaning is very common and the secondary rare. In other instances it is just the reverse. The common and most probable meanings are in the Hamilton method insensibly, but surely, fixed in the mind. Another recommendation we have not mentioned in the Hamiltonian system is that it can be combined, and is constantly combined with the system of Lancaster. The key with the literal translation is sufficient for those who have no access to classes or schools, but in a Hamiltonian school, during the lesson, it is not left to the option of the child to trust to the key alone. The master stands in the middle, translates accurately and literally the whole verse, and then asks the boys the English of separate words, or challenges them to join the words together as he has done. A perpetual attention and activity is thus kept up. The master, or a scholar (turned into a temporary Lancasterian master), acts as a living lexicon; and if the thing is well done, it is a lively and animating lexicon. How is it possible to

compare this with the solitary wretchedness of a poor lad of the desk and dictionary, suffocated with the nonsense of grammarians, overwhelmed with every species of difficulty disproportionate to his age, and driven by despair to peg-tops or marbles?

"In teaching on the united basis of the Lancasterian and Hamiltonian principles, the number in a class is of little moment, it being as easy to teach a greater as a smaller one, bringing them all to the language itself, by the master reciting with a loud, articulate voice, the first verse of John thus: *In in, principio* beginning, *verbum* word, *erat* was, *apud* at, *Deum* God, *et* and, *verbum* word, *erat* was, *Deus* God. Having recited the verse once or twice himself, it is then recited precisely in the same manner by any one in the class whom he may judge most capable, the person copying his intonations as much as possible. Then the second verse is given in the same way, and at the seventh lesson it is found that the class can translate without the assistance of the teacher, except for occasional correction. It cannot be too deeply impressed on the mind of the pupil, says Hamilton, that a perfect knowledge of every word of the first sections is most important to the ease and comfort of his future progress."

The real way of learning a dead language is to imitate as much as possible the method in which a living language is taught. When do we ever find a well-educated Englishman or Frenchman embarrassed by an ignorance of the grammar of their respective languages? They first learn it practically and unerringly, and then if they choose may look back and smile at the idea of having proceeded by a number of rules without knowing one of them by heart, or being conscious that they had any rule at all. Thus in the Hamiltonian method a great deal of grammar impresses itself on the mind, as it does in the vernacular tongue, without any rule at all and merely by habit, comprehending more words and phrases than by the old system. Many rules of grammar thus become insensibly but firmly fixed upon the mind of the pupil. We are far from saying that the grammar thus acquired will be sufficiently accurate for a first-rate Latin and Greek scholar, but there is no reason that a pupil educated in this system may not carry the study of grammar to minuteness and accuracy. The only difference is that he begins grammar as a study after he has made considerable progress in the language and not before—a very important feature of the Hamiltonian system, and a very great improvement in the education of children.

Let us hear what Locke says on this subject: "If grammar

ought to be taught at any time, it must be to one that can speak the language already: how else can he be taught the grammar of it? When any one finds in himself a necessity or a disposition to study any foreign language to the bottom and to be nicely exact in the knowledge of it, it will be time enough to take a grammatical survey of it. If his use of it be only to understand some books written in it, without a critical knowledge of the tongue itself, reading alone will attain that end, without charging his mind with the multiplied rules and intricacies of grammar."

The Morning Chronicle, for November 6, 1825, contains the Report of a Committee on the System of Hamilton, from which we make an extract:

"An examination on the Hamiltonian system was held by several distinguished individuals, with a view to ascertain its efficacy in communicating a knowledge of languages. There were eight lads between twelve and fourteen—the children of poor people—who when they were first placed under Mr. Hamilton possessed no other instruction than common reading and writing. They were obtained from a common country school, through the interposition of a Member of Parliament who takes an active part in promoting charity schools throughout the country, and the choice was determined by the consent of their parents, and not by the cleverness of the boys.

"They have been learning Latin, French, and latterly Italian. They first read different portions of the Gospel of St. John in Latin, and of Caesar's Commentaries, selected by the visitors. The translation was executed with an ease which it would be vain to expect in any of the boys who attend our common schools, even after the attendance of three or four years, and proved that the principle of exciting the attention of the boys to the utmost *during the process by which the meaning of words is fixed in their memory* had given them a great familiarity with so much of the language as is contained in the books alluded to. Their knowledge of parts of speech was respectable, but not so remarkable, as the Hamiltonian system follows the natural mode of acquiring languages, and only employs boys in analyzing when they have attained a certain familiarity with any language. The same experiments were repeated in French and Italian with the same success, and upon the whole we cannot but think the success has been complete. It is impossible to conceive a more important mode of putting any system to the test than to make such an experiment on the children of our peasantry. They were purposely selected by a gentleman who defrayed the expense, and who had the strongest desire to put strictly to the test the efficacy of the Hamiltonian system.

The experiment was begun the middle of May, 1825, and concluded on the same date of November, in the same year, exactly six months after.

"In fine, we are strongly persuaded that the time being given, this system will make better scholars; and the degree of scholarship being given, a much shorter time will be needed. If there is any truth in this, it will make Mr. Hamilton one of the most useful men of the age; for if there is anything which fills reflecting men with melancholy and regret, it is the waste of mortal time, parental money and juvenile happiness, in the present method of studying Latin and Greek."

The Lancastrian and Hamiltonian systems are presented by the writer as "Educational Experiments" by their advocates, based upon their respective theories. More details of the "Hamiltonian plan of teaching foreign languages" might have been given from the pamphlet issued for circulation, including a large portion of the article from the *Edinburgh Review* of June, 1826, on Hamilton's publications, intermingled with quotations from Locke and statements written by himself.

Enough, however, has been copied to show the advantage of so readily acquiring a copious vocabulary of the Greek and Latin words, and particles which form so large an addition to the English language. Even if the plan should be pursued no further, it will facilitate the knowledge of our own tongue in giving a more accurate idea of the meaning of its words by "ascertaining the true and radical signification of words derived from foreign languages."

A REVIEW OF THE FOSSIL FLORA OF NORTH AMERICA.

[CONCLUDED.]

FROM the carboniferous period, there is in this country an immense interruption in the succession of the geological formations, and consequently a corresponding blank in that of the geological floras. The American Permian, mostly represented by magnesian limestone, has till now contributed to paleontology but few specimens of *Calamites* only. In Europe the flora of this period, known especially by an admirable work of Göppert, is

composed of ferns and Equisetaceæ, with very few *Lycopodiaceæ* and many conifers of peculiar type; the *Volzia*, *Valchia*, *Ullmannia*, etc.; types limited to this formation only, without known precursors and successors. It has however a dozen species of conifers, known by the texture of the fossilized trunks, and referable to that genus of *Araucaroxylon* to which belong the fossil trunks of our Devonian.

We have seen that some species of the carboniferous ferns ascend in Europe to the Permian. Even the American species of some localities, (some of those, for example, represented in the concretions of Major Creek, Illinois) have a facies which appears to Schimper so evidently Permian, that he is disposed to refer them to this formation. These concretions, however, like the coal strata with which they are connected, are in our lower carboniferous. They overlay at Morris the sub-carboniferous limestone, and at Colchester are separated from the millstone grit by only a few feet of strata, and, besides, the connection of these plants in the same strata with an abundance of remains of *Lepidodendron* and their fruits, large species of *Alethopteris*, etc., is sufficient evidence of their age.

The flora of the Trias is apparently not represented in the North American Geology. The deposits of coal near Richmond, Virginia, and in North Carolina, have been referred to this period, but from the character of the fossil plants, they appear to be related rather to the lowest member of the great Jurassic period—the Triasso-Jurassic or Rhetic of the European geologists. These plants represent a few species of Equisetum and a large number of ferns, wherein the genera *Pecopteris* and *Sphenopteris* are scantily represented. One of the most remarkable types is that of *Clathropteris*, a fern with large runcinate leaves, whose form and areolation in broad square areas bear some likeness to leaves of Dicotyledonous plants. The essential components of the coal, however, as indicated by the fossil remains, are Cycadæ; *Podozamites*, *Pterophyllum* especially, and conifers of a peculiar group of the firs. This fossil flora is not satisfactorily known, its characters appear blended with those of the Triassic, where begins the reign of the Gymnosperms, which continued on through the whole Jurassic period.

These are the dark ages of the vegetable world. In the North

American Continent, not a single plant is known as yet from the Jurassic, which, in its subdivisions,—Lias, Oolith, Corallien and Wealden—is represented in some parts of Europe by many thousands of feet of measures. Even in Europe the vegetation of this period is comparatively little known. Scarcely five hundred species of plants have been as yet recognized from the whole of its divisions. Of these, sixteen per cent. are referable to Algæ or marine plants; four to Equisetaceæ, forty-one to ferns, and forty-five per cent. to Gymnosperms; twenty-nine per cent. are Cycadæ, and the balance, twelve per cent., conifers. A few monocotyledons of uncertain relations, mostly Yuccacites, with two species of Chara, are described from the upper stages of this formation. Of course we do not know what riches of vegetable remains this long period may keep in reserve for the study of future paleontologists. It is however fair to presume that the essential characters of its flora are known already, and that, indeed, it is essentially composed, for the land vegetation, of Acrogens, and especially of Gymnosperms. Till the cretaceous period, no traces of Dicotyledonous plants have been recognized. This brings us to the examination of a number of fossil plants recently discovered by Dr. F. V. Hayden in his geological explorations of the Western Territories, a discovery which has justly excited a great interest among all the paleontologists of this age. These plants represent the cretaceous flora of the Dakota group.

This formation, covering a wide area along the Missouri and Platte rivers, and in Kansas, Nebraska and Minnesota, extends from Texas to the northern limits of the United States in a width of seventy to one hundred miles, and probably passes farther north into the English North-American possessions, even perhaps to Greenland. Along a portion of its eastern border, as in Kansas, it overlies immediately, without any kind of transitional strata, the Permian limestone; while near the base of the Rocky Mountains it rests directly on rocks containing Jurassic fossils; and, therefore, as its animal fossils are all cretaceous, it represents as yet the lowest American cretaceous. By the relation of some of its fossil remains, however, its synchronism seems to be with the middle cretaceous of Europe. In this formation, generally of reddish ferruginous-sandy shale, vegetable remains are, if not

in profusion, at least tolerably abundant, and especially in a fine state of preservation. They are mostly leaves, with a few fossils and a few stems, from which the relation of generic types at least, if not of species, is ascertainable. This cretaceous flora, now known by more than one hundred species, has not preserved any of the antecedent types, not even of those of the Jurassic, the immediately preceding age. The ferns and the conifers are few, and all represent new forms. One vegetable only is doubtfully referable to Cycadæ; and what is the more remarkable, this flora mostly represents dicotyledonous plants, especially the types of the essential genera into which our present arborescent vegetation is distributed. From the lower cretaceous of Europe no dicotyledonous plant has been described up to the present time; one only has been recently recognized by Heer in the old cretaceous of Greenland, where the flora has still great affinity with that of the Jurassic, especially by a preponderance of Cycadæ. It is therefore clear that the discovery of a group of plants manifesting characters related to those of our present flora and found in connection with a formation referable by its animal remains and its geological station to the old cretaceous, should be of great interest to science.

The monography of the fossil plants published in the reports of Dr. Hayden,¹ describes five species of ferns, one doubtful Cycad, six conifers, three monocotyledonous, and the balance all dicotyledonous, representing genera distributed in all the divisions of the present vegetable scale: the Apetalous, Gamopetalous and Polypetalous. It is natural to suppose that the limitation of species represented merely by leaves can not be very precise and accurate. But the value of the species has not to be considered for the relation of this cretaceous flora; only the typical forms characterizing genera, which may be recognized easily, even by those who are scarcely acquainted with botany. The leaves of the Beach, for example, those of the Platan or Buttonwood, of the Tulip tree, the Sweet Gum, the Poplar, the Magnolia, the Walnut, even those or some sections of our oaks, like that of the Chestnut Oak, positively identify the genera which they represent. The table of the general

¹Report of the U. S. Geological Survey of the Territories. F. V. Hayden, Geologist in charge. Vol. VI.

to which the forms of the cretaceous leaves are referable, has among others: *Liquidambar*, *Populus*, *Salix*, *Betula*, *Myrica*, *Celtis*, *Quercus*, *Ficus*, *Platanus*, *Laurus*, *Sassafras*, *Diospyros*, *Azalea*, *Magnolia*, *Liriodendron*, *Menispermum*, *Negundo* or *Acer*, *Paliurus*, *Rhus* or *Juglans*, *Prunus*. From this list, seventeen of the genera are those to which belong the species of trees and shrubs which have at the present time the more general and the widest range of distribution. Indeed, most of the genera of the arborescent North American flora are represented in the cretaceous by analogous types, with the exception of those which are characterized by serrate, denticulate or crenate leaves, like *Tilia*, *Aesculus*, the serrate *Rosaceæ*, *Hamamelis*, *Fraxinus*, the *Urticineæ*, like *Planera* *Ulmus*, and of the *Amentaceæ*, *Betula*, *Alnus*, *Carpinus*, *Corylus*, *Carya*, etc., all with serrate or dentate leaves. The more appreciable and general characters of the cretaceous leaves are a generally thick coriaceous substance and the integrity of the borders. From this it is possible to derive some reliable conclusions in regard to the origin of the more marked types of the North American arborescent flora; and, by correlation, to recognize the climatic circumstances governing the flora of the Cretaceous Dakota Group, as identical, for the temperature, at least, with those of the North United States at the present time.

The Dakota group is overlaid in the west and to the base of the Rocky Mountains by more than two thousand feet of measure, marine formations only, characterized as cretaceous by an abundance of animal remains. The upper member is composed of heavy beds of black shale, with species of *Inoceramus*, *Baculites*, *Ammonites*, *Belemnites*, etc. To this are superposed the lowest strata of the great Lignitic, a series of layers of sandstone and of clay shale, with remains of marine plants, well-preserved Fucoids, and minute fragments of land plants. Over this big sandstone, as it has been generally called, are the productive lignitic measures, whose distribution in beds of coal, having underlying clays and overlying shales, generally holding in their composition a profusion of fossil land plants, with intermediate beds of sandstone, etc., is remarkably similar to that of the carboniferous measures. The comparison of these coal formations of different periods is remarkably interesting; but the present sketch has

to be limited to the consideration of the essential characters of the American geological floras only.

From a theoretical point of view, it would seem rational to suppose that in ascending higher in the series of the geological formations, and in coming nearer to the present epoch, we should find a constantly and gradually more distinct relation between the ancient floras and that of our time, and that, therefore, the plants of the lower Lignitic, though intimately allied to those of the cretaceous, should still bear a closer relation to those of the present North American flora than do the cretaceous leaves. This is, however, not the case. The lower lignitic flora has not a single species identical with any of the cretaceous, and even very few have a distinct relation to them. Its more essential character is marked by the presence of Palms, whose remains, especially those species of *Sabal*, are in profusion, though appearing here as the first representatives of this family, at least in the geological ages of this continent. As seen by some of their trunks and leaves, they are of great size, and in such a proportion that at some localities, as at Golden City, Colorado Territory, they seem to have composed one-fourth of the vegetation of that time. They are, moreover, present in the whole extent of the lower Lignitic, specimens of their leaves having been collected from Placiere Mountain, in New Mexico, to Fort Union, on the Missouri river, or from 36° to 49° of latitude. In the lower Lignitic, and in connection with the Palms, are leaves of *Ficus*, *Cinnamomum*, *Magnolia*, *Myrica*, *Quercus*, *Platanus*, *Diospyros*, *Rhamnus*, *Viburnum*, etc., rather related by their forms to southern than to northern types. The preponderance of Palm remains indicates for this flora a climate different from that of the Dakota group. In considering the numerous and thick coal beds of the lignitic, it is evident that the atmosphere was, at this epoch, charged with a high degree of humidity, which, tempering the climate by diminishing the extremes of heat and cold, furnished the conditions of a different kind of vegetation. Circumstances similar to those remarked at the carboniferous period are reproduced in the lignitic, where also extensive flats, wide surfaces of land slowly emerging from the sea, were for a long time under an atmosphere of fogs and vapors. The vegetation was then somewhat similar in its aspect to that of the swamps

along the gulf shores of the south; and thus, in comparing the flora of the Dakota group to that of the lower Lignitic, their general facies indicate about the same difference of temperature as is marked at the present time by the vegetation of Ohio as compared to that of southern Louisiana and Florida, where the Palm family is represented by *Sabal* and *Chamaerops*. The relation of the flora of the lower Lignitic with that of our time is more distinctly marked by the Magnolias, which closely resemble living species, at least as to their leaves. The Oaks are more numerous also. Among them appear the first type of the group of our Black and Red Oaks, with deeply lobed leaves, like those of *Quercus lyrata*, and *Q. falcata*. The Lignitic flora has, besides, species of *Cornus*, *Vitis*, *Nelumbium*, *Sapindus*, *Zizyphus*, well characterized *Juglans*, *Glumaceæ* like *Arundo*, *Phragmites*, *Carex* and a considerable number of large ferns; *Woodwardia*, *Pteris*, *Lygodium*, all genera represented now in the North American flora, and not in that of the Dakota group. The Maple (*Acer*) is not positively recognized in the lower Lignitic. *Betula* and *Alnus* are as indistinctly and sparingly represented as in the Cretaceous flora, for the leaves of the lignitic flora resemble those of the Dakota group by their generally thick coriaceous substance and entire borders. About two hundred species have been already described from the lower Lignitic of the Rocky Mountains and of the Mississippi.

Considering the distribution of the plants and their relation, the tertiary formations of the Rocky Mountains have been divided in four sections. 1st, the Lower Lignitic, whose flora has been remarked upon, is referable to the Eocene. 2d, the Evanston Group, considered as Upper Eocene or Lower Miocene. 3d, the Carbon Group, or Middle Miocene. 4th, Green River Group, or Upper Miocene.

The flora of the second group is represented as yet by about 90 species, of which nearly one-third are identical with those of the lower stage. It has a number of fruits which have been considered as referable to Palm, but no leaves of *Sabal* or of other species of this family have been found with them. Therefore, the presence of Palms in these beds is still uncertain. The fossil plants of this section have, for the first time, a number of species with dentate and serrate leaves of *Salix*, *Betula*, *Alnus*, and *Acer*.

The general characters of the flora partake of both those of the first and third group. Its plants, however, should be more abundantly collected and better known, before its geological station is definitely fixed. It may represent merely an upper member of the first group. The third group is especially known by the fossil plants which are found in abundance in the shale overlying the lignite beds of Carbon; they represent a flora mixed in its characters, and consequently of great interest. Its general facies is positively miocene, for of the 56 species which represent it, 18 are identical with forms of the European miocene, and thirteen with those of the Arctic flora described from Alaska, Greenland and Spitzbergen. It has still, however, a few species that may be considered remnants of the lower Lignitic, and are not present in the Arctic miocene. Among others a *Cinnamonum*, a *Ficus*, a *Smilax* and a *Rhamnus*, the last two represented by large leaves. It unites, therefore, in its characters, miocene Arctic types with miocene types of middle Europe, and a few of those of the lower American lignitic, considered as sub-tropical. This reunion of types at the same point indicates the wide extent of the thermal zones during the miocene period, as well as the concordance of the floras with synchronous miocene formations over wide areas, even under distant degrees of latitude. It therefore disproves the idea of a succession in time of formations bearing identical characters, so far as their fossil remains are concerned, at least, and thus complicates, at least for this country, the question of the migration of species and of their derivation from a peculiar point.

The flora of the Carbon Group has some of its species scarcely different from species of our present flora, which may be considered as their offspring. *Populus latior* is represented now by *P. Canadensis*, *P. monilifera*, *P. angulata*, three closely allied species as variable and difficult to fix in their characters as is the miocene species. The North American species of *Corylus* are scarcely distinguishable from *C. Macquarryi*, very abundant in the miocene of Alaska and Greenland. Our *Platanus occidentalis* is a mere modification of *P. aceroides*, as both *Acer saccharinum* and *Acer dasycarpum* are traceable with the same degree of evidence to *Acer tribolatum*. In the conifers we have at Carbon *Sequoia Langsdorfii*, closely allied to *S. sempervirens*, the most common arborescent species of California, and *Taxodium dubium*,

with which *T. distichum*, the bald Cypress of the southern swamps, is apparently identical.

The fourth group referred to the upper Miocene, is distinct from the upper Lignitic, which it overlies in patches of moderate extent, and is impregnated with bitumen. It is a fresh-water formation, mostly of laminated calcareous clay shale, the result apparently of the periodical drainage of the shallow lakes and swamps. In places they hold a profusion of vegetable fragments, especially representing Conifers, with insects, feathers and scales of fishes. At some other localities they have no plants whatever, but instead, skeletons of small fishes in equal abundance. The flora of this group is related to that of the European Miocene in a less degree than the former. By its types, and essentially by its facies, it is more closely allied to that of North America at the present time. Its Conifers are referable to the genera *Taxodium* in two species, *Sequoia* in three; *Thuya*, *Glyptostrobus*, *Pinus* and *Abies*. It has also a number of species of *Myrica* and *Salix* closely allied to living species; an *Ampelopsis*, a *Staphylea*, species of *Ulmus*, *Planera*, *Ilex*, *Juglans*, etc., all specifically related to recent types. From the preponderance of Conifers and Shrubs, the climate of this epoch appears to have been somewhat colder than at the former period.

In considering the distribution of the plants in the whole tertiary of the Rocky Mountains, there is evidence of a slow upheaval of the land, of a comparative diminution of atmospheric humidity, and consequently of a lowering of the temperature. During the process of formation of this fourth group, the ground had become hilly, if not already mountainous or sub-alpine; the land was a succession of valleys, hills and lakes; the uplands covered with forests of Conifers, the swamps and the dales with shrubs, willows, wax-myrtles, numerous species of holly, sumac, etc. The Lignitic precedes in its formation the upheaval of the mountains, while the strata of the Green river group were deposited during the period of upheaval. The flora of the fourth group, known as yet by about eighty species, has only ten species common to the three former groups, and even six of these are so-called omnipresent species, or present in the whole thickness of the tertiary. It has, however, thirty-two of its species identical with species of the European upper Miocene, and none positively

identical with any living at our time. It cannot, therefore, be referred to the Pliocene age.

This review should not be closed without a few remarks on the floras, too little known as yet, of some more recent geological epochs. A large number of specimens, representing about forty species, have been obtained, in a very fine state of preservation, from the Chalk Bluffs of Nevada county, California, referred to a pliocene formation. These plants are related in a more evident degree to those of the present flora by their general facies, and by a few identical species. Except two or three of the types referable to Asiatic (Japanese) origin, they are American, especially related to species of the eastern slope of the continent, and, by a few, to species still in the flora of the Rocky Mountains. Remarkably enough, some genera, like *Ulmus*, for example, are represented in the specimens of the chalk bluffs by a large percentage of the remains, while they are seen no more in the flora of California. A formation of apparently the same age is present in the chalk bluffs or clay beds bordering the Mississippi river below the mouth of the Ohio, near Columbus, Kentucky. Too few species have been as yet collected from that formation, and thus nothing positive can be said about its flora. Its relation seems to be very marked with the present flora of the Southern States, or rather of the Gulf shores.

Planera Cymelini, *Quercus virens* and species of the *Ulmus*, have been described from that locality. No doubt when its fossil plants have been collected, very valuable indications will be obtained from their study in regard to their relation with more ancient types and transitional forms from the old ones to those of the present flora of North America.

To this chain other links can be added in the future. The drift of the West, in Ohio and Indiana especially, is inter-stratified by deposits of leaves and trunks; also, by peat formations, where a profusion of vegetable remains are obtainable for studying the progress of the vegetation during the Glacial Epoch. Still nearer the present time and corresponding to the terrace epoch, thick beds of leaves heaped along the lower Ohio river are open to the research of the Paleontologist. There the leaves, still undecomposed, mixed with sand and clay, are pressed together in banks which are cut in stages like terraces. They represent

mostly species of our flora, but some differences of character may be found there as a clue to the mode and progress of modification under various and appreciable kinds of influences.

This would complete the chain of evidence in regard to the development and succession of the types of the North American flora, from the cretaceous to the present time. What an admirable record is in reserve for the botanist who shall be disposed to give his time to the noble task of deciphering and of transcribing it! There is certainly not a country in the world where the study of the geological floras, of their characters and successions, can be pursued with more advantage and furnish at the same time more important and more trustworthy documents than in the United States.

Except the Jurassic and the Permian, the groups of the geological floras are represented in our formations by abundant and generally well-preserved materials, and the distribution of the strata is so distinctly marked that their age and succession are easily determined. Therefore the deductions which are likely to be derived from the study of their vegetable fossil remains shall have a great degree of positiveness and reliability.

Researches in the vegetable world of the old periods of our earth are now pursued with great activity by some of the greatest and noblest minds of Europe. From Greenland to Italy, from the borders of the Atlantic and of the Mediterranean in France to the eastern limits of Russia, specimens of fossil plants are collected, sent to museums, examined and described by authors of celebrity, and their valuable works constantly discover a greater importance in vegetable paleontology. In this country, this branch of science has few adherents; for the reason, perhaps, of the lack of good collections, and special libraries being difficult of access, and also because it is not of immediate application to the material welfare of the human race. It has, however, kept pace with the prodigious scientific development of the last fourth of the century. In 1850 the fossil land plants known from the North American formation, were only eighteen (18) species, described by Brongniart in his *Végétales fossiles*, from specimens sent to him from the coal measures by Prof. Silliman. At the present time more than one thousand species have been described from the various geological formations. A number of students are, moreover, ardently

searching for and gathering specimens, and the museums of natural history of the best scientific schools have a section for vegetable paleontology.

Already the study of the North American fossil plants has supplied, in regard to the distribution of the species at different periods, some important information which modifies a few of the conclusions derived from European vegetable paleontology. Though the isothermal zones have been evidently of a width proportionate to the age of the geological periods, producing in the carboniferous times, for example, uniformity of vegetation over the whole Northern hemisphere, if not over the whole surface of the earth, it appears that there was already at this period a continental or local facies marked in the groups of vegetation. The North American character is recognized in the coal flora of this continent by Schimper, in its *Vegetable Paleontology* as it has been for a long time represented by the works and descriptions of American authors, and the facies become more and more distinct in the more recent periods. The precedence of vegetable types in the geological flora of this continent is distinctly recognized, and therefore the hypothesis of the derivation of the North American flora from Miocene European types is necessarily set aside. On this last question, former remarks in this paper prove the unity of the present flora, derived by constant succession of related vegetable forms from the cretaceous, at least. On the question of precedence of vegetable types, it has been remarked also that we find already in the Devonian of the United States, trunks of Conifers recognized as prototypes of the Araucaria, which are only found later, in the subcarboniferous of Europe. Our carboniferous flora has a number of its forms recognized later in the Permian of Europe. The Triassic flora of Virginia and North Carolina is half Jurassic. A number of cretaceous genera of the Dakota group are reproduced in the Miocene of Europe, as they are, too, in some of the North American tertiary vegetable groups and also in the flora of this epoch. Therefore the relation of the European Miocene is evidently to the American cretaceous. And in following the comparison upwards, we find in what is considered the Eocene of the Lignitic of the Rocky Mountains, a larger number of forms identical or closely allied to European Miocene species; while the Miocene group of Carbon represents

the youngest type of the tertiary flora of Europe and Greenland, with species of *Platanus*, *Acer*, etc., undistinguishable from indigenous species of our present flora.

More important questions than these, but as yet problems only, belong to the domain of vegetable paleontology. Is the multiplication and succession of species a result of gradual modifications of organs or of a spontaneous production? No positive answer has been given to this question which occupies the mind of every naturalist, and which, as Gray justly says, is a problem whose solution is reserved to vegetable paleontology. Fossil plants are documents relating to the past history of the world. They have recorded in their characters the physical conditions of the atmosphere from the earliest period. Science has as yet deciphered a few incomplete fragments of these records. Every student may read a page or a line of this admirable book. As vegetable life is the promotor of animal life, it precedes and explains it. No one knows as yet in what relation the characters of the representatives of both kingdoms may stand, and whether the animal forms may not be explained or surmised by those of the plants. On the one hand especially, in recognizing the transitions which unite some species, modifications which appear in plants as resulting from atmospheric influence, it seems as if the development of the vegetable world was subject to mere material laws. On another hand, every naturalist is forced to acknowledge not only a profound intelligence in the plan, in the admirable harmony governing the vegetable world even in its minutest details, but to recognize also and to proclaim omnipotent prescience and providence in the preparation of the materials which, as a presage of the advent of man, have been garnered up in his abode and by the world of plants for the fulfillment of his future destiny.

The possibility of ever being able to answer questions of this kind has been denied to vegetable paleontology on account of its want of precision in the determination of vegetable remains. But this science is in its infancy, and the childhood of science is marked, like that of man, by a series of trials and failures from which strength and proficiency are derived. The first astronomers did not measure the distance from the earth to the fixed stars, nor weigh the planets by the diameter of their orbits.

Hooker himself, the most precise and careful analyzer of botanical characters, recognizes the accuracy of their determinations. The award of the great Wollaston Medal to the celebrated Professor of Zurich, sufficiently proves the appreciation of the valuable services rendered to science by vegetable paleontology, and the high rank which it has already attained in Europe.

LEO LESQUEREUX.

FINANCIAL DUTY OF THE NATION.

THOSE who have been close observers of the several panics that have occurred in our country since 1837, are watching with peculiar interest and much anxiety the various financial plans suggested for future adoption. We have the wide range from specie resumption to repudiation, and each extreme is promised as a "cure all," while the practical and reasonable handling of the subject is lost sight of. The specie resumption party are working in the interest of the "money kings," at home and abroad, and against the people, and could they by unwise legislation bring about specie payments the same could not be maintained six months, while the havoc of the attempt would last through this generation. The other extreme, Repudiation, would be more disastrous. It will be wise, therefore, to look at our financial obligations in all their relations and, if possible, to adopt such measures as will leave every energy of the nation free to bring about a restoration of conditions that existed before the war, or better ones. We have a serious task to perform, and to enable us to earn our way out of debt every industry of our country must be fostered, not smothered. In handling the difficult problem we must look at things as they exist, and not as we might wish they were. The national necessity induced Congress to pass the Legal Tender Act, and create by enactment \$400,000,000 of money, made such by the pledges of the nation's faith. Figures so unprecedented changed the entire status of the nation, and on the issue of these legal tender notes and their re-issue is based our whole funded national debt, nearly all the rail road bonded debt, and the stock creations and expansion of private enterprise. In a word,

the Legal Tender issue is the *foundation stone* of our vast inflation. It is quite clear then that if the foundation stone is taken away, the whole financial structure of our nation must fall, and wide-spread ruin be our inheritance.

In our thoughts about specie resumption, we have to provide, not only for the redemption of the \$400,000,000 of Legal Tender notes, but also for all their consequences. How, then, are we to resume specie payments, other than by traveling back the same road by which we left home? An easy task, if we foster the accumulated resources of our people, and do not bankrupt them by hasty and unwise legislation. Every banker of forty years' experience, knows that specie payments in this country has always been a farce; whenever a serious demand existed, panic came and suspension followed, each demonstration proving that specie was not the standard of value, and that to restore values it was necessary to restore confidence, to stay panics, and not to provide specie, but to bring the public mind to the conviction that they did not need it. When that state existed on each occasion our banks resumed—the people were satisfied with their mines, mills and meadows, and the interchange of commodities went on to profit as gaily as a marriage bell. The great thought that follows, then, is how to prevent panics; and that brings us to the consideration of the panic of 1873, and points us to the accountability to be established, of the nation and the banks to the people. We have said that our present condition came from the Legal Tender act of the nation; therefore, to the government we look for our redemption. We cannot make ourselves better than our Government, and cannot offer the people of this country, or other nations dealing with us, specie at present. We can only offer them as security our national credit. That is our foundation stone, and we must live or die by it. We must, therefore, guard it as the apple of our eye. No increase of our debt must be permitted, and we can only decrease it by prosperity; can only pay it off as individuals pay their debts, by new earnings.

Before speaking of specie payments by our banks, let us see what was their ability in the panic of 1873. They could not pay specie or legal tender notes or national bank notes; they *failed*, and resorted to *certifications* and the issue of clearance house

certificates in New York to more than \$26,000,000, and in Philadelphia to more than \$5,000,000; and during this time national bank notes commanded a premium of two per cent. over bank credit, from the necessity to use them as a basis of exchange between one section of the country and another. The action of the banks under the circumstances was wise, and saved the merchants, manufacturers and people from universal bankruptcy; but their entire inability to meet the demands upon them was proved beyond question. How idle, then, to talk of specie payments by the banks, when it has been demonstrated that they could not pay their debts in legal tender notes or even in their own (national bank) notes, and this self-evident fact caused the alarm and want of confidence which has resulted in this long season of stagnation and national loss.

How, then, are we to cure this trouble? By traveling back the same road we left home by. We must, before looking to specie payments, acknowledge our Government credit as the standard of value, and hold every bank accountable to redeem its obligations with Government credit, and the banks in turn exact the same conditions from their customers. So soon as we all come within that controlling influence, we shall begin to mend our condition, for we shall then be trading within our means, for we have nothing outside and apart from our Government in a financial sense. We cannot make ourselves as a whole better than our Government. In the late panic it was demonstrated differently than from any previous one, that the people were satisfied with our currency, it being secured by Government credit, as the legal tender notes or as the national bank notes, by a deposit of Government bonds; therefore there was no distrust or desire to get rid of them; on the contrary, they commanded a premium. This fact saved the country from the intensely injurious effects of former panics, and could we have relieved ourselves of the distrust in our banking institutions, the shock of the panic might have been greatly ameliorated, if not entirely avoided. Their inability to meet their obligations by prompt payment in currency on demand, caused the bulk of our trouble. The clearance house system of bank due bills worked well, and they answered for local purposes. Each large city, within its "charmed circle" of certification, kept its banking institutions solvent as was possible, based upon

commercial credit ; but their several local devices were defective, from the fact that they were disconnected and not national. What was wanted was a *national clearance house* certificate, which would pass all over the country and be received in all the established bank clearance houses. Such a recourse would have relieved the currency of the country from the necessity of use for exchange purposes and devoted it entirely for local requirements, such as the payment of wages and the smaller transactions of trade. The fact of its being denied by the banks to their creditors caused it to advance to a premium of 2 per cent., and inaugurated a system of hoarding which necessitated the banks to resort to the plan of certification in place of prompt payment on demand. This combination of evils could have been avoided, and can be avoided in the future, if Congress will pass a law creating national clearance house certificates to the extent of \$100,000,000 (drawing no interest), which can be obtained by any and all the associations of bank presidents upon a deposit in any sub-treasury of the United States of United States Government Bonds, the interest on such bonds to cease while so deposited. Couple this with a law obliging all banks to keep their reserve in the bonded debt of the Government, releasing the legal tenders now held for that purpose, and the right move will then have been made in the direction of a reduction of our national debt, and financial soundness secured to our banking institutions and to the people. To enable the banks to fortify themselves with government bonds, let an issue be made to them of 4 to 4½ per cent. interest bonds at par, and the present outstanding debt of 6 per cent. bonds to a like amount be redeemed either by payment in gold or purchase at market prices. *Such a financial system will bring about a healthy contraction—not a contraction of the circulating medium, but a contraction of inflating and vicious credit* which causes over-production in every department of manufacture, rail road enterprise and general trade ; and this in turn will cause our importations to be brought within healthy bounds and the balance of trade turned in our favor. We are suffering from over-production ; when this is checked our industry will reap its due reward of profit, and it can only be checked by holding the banking system to a strict accountability. Make our government credit the standard of value, let all conform to it and we shall be safe. If such security does not satisfy foreign nations,

then let them stop selling to us; we have nothing better to offer them. If they should relieve us from buying their gewgaws, it would be a blessing indeed.

In the late panic the President and Treasury Department found it necessary to reissue \$26,000,000 of the \$44,000,000 retired greenbacks. This, with the \$26,000,000 clearance certificates in New York and \$5,000,000 in Philadelphia, already referred to, and a further amount in other financial centres, all go to convince us of the necessity of a reserve power of relief in seasons of panic and distrust, and this we propose to accomplish by the \$100,000,000 national clearance house certificates; and all will admit that a safe banking system requires that every bank in the country should be in condition to avail of them at moments when panics were *threatened*. We say *threatened*, because we are convinced that the very knowledge of so valuable a recourse would quiet public alarm and anxiety, and panics would be avoided. No scheming combinations would attack so formidable an amount as \$100,000,000 of Government aid, and the knowledge of its existence would render it almost certain never to be called upon except to a very small extent. The 3.65 convertible bond scheme, we have a right to presume, will never be adopted by the American people, as the tax-payers are not prepared to allow the Government to pay interest on money it does not want and dare not use (being liable to be called upon to reconvert at any moment), for the benefit of the money kings, and the people will never permit the circulating medium of the country to be diverted from their use at as low a rate of interest as the varying demands of trade will permit.

THE GERMAN WORKINGMAN'S BEST FRIEND.¹

THE progress of society brings with it immense dangers and responsibilities. Whether the social order bear the marks and evidences of a wise design, and all its parts work together for

¹ COURS D'ECONOMIE POLITIQUE A L'USAGE DES OUVRIERS ET DES ARTISANS, par Schultze-Delitzsch. Traduit et precede d'une Esquisse biographique et d'un Aperçu sur les nouvelles Doctrines économiques et leur Application, par Benjamin Rampal. En deux Tomes. Pp. cclxxviii. et 357. Paris. Guillaumin et Cie. 1874.

the equal good of all classes until violently interfered with—as the nationalist and hopeful Economists believe—or is so clumsily and imperfectly constructed that social advances inure of necessity to the benefit of the few—as their less hopeful opponents maintain—it is certain that the actual progress of mankind in most civilized communities has contributed rather to the weakness than to the stability and unity of society. The wealth that rewards the combined efforts of labor and capital has permanently enriched the capitalist only. The condition of the working classes, while better than that of the same class in past centuries, has not advanced *pari passu* with the growth of comfort and well-being in the classes above them. Vast accumulations have been generally made in the upper stories of the social edifice, whose excessive weight threatens the destruction of the whole edifice. The spread of intelligence has been confined to the few, and the great social and organizing convictions that make men and citizens out of the mere human material for mobs, have not permeated the mass of the people. While Democratic reforms have raised the peasant and the artisan to the rank of a voter—of a sovereign *pro tanto*—they have left in his mind the blind passions of the Jacquerie of the middle ages. A general and not always unjustifiable discontent with their lot grows far faster than does any improvement in its character, and the great financial crises, which prove either that society is badly ordered in its very foundations, or that its good order is violently disturbed by individual and short-sighted selfishness, bring to a head and force to utterance the bitter feelings that have been gathering beneath the social crust during years of quiet and of general progress.

This description applies, of course, much less forcibly to our own country than to some others. With us the general condition of the working classes, while not all that could be desired, is yet one of great promise and of great opportunities. Yet even in America we have not always been true to ourselves, nor wise with the highest wisdom. We have lost opportunities which we may never regain, of placing our national industries upon such a footing as would promote to the utmost the harmony of all industrial interests. We have but very imperfectly realized as a nation and as individual citizens that solidarity of classes, which binds the highest to the lowest as members of one body, and makes the in-

terest of all to be the interest of each. Our passion for money-getting has prevented our doing well those things by which money is got—*i. e.* our doing them in the highest spirit and with a sense of our responsibility for their being done well. And then upon the top of all of our own sins and short-comings, we have imported a large share of the bitter harvests whose seed was sown in Europe by other hands than ours. We have imported a huge mass of disaffection and social bitterness from her workshops and her mines, and with it a plenty of the crude theories of social reform that demagogues plant, “ruling classes” water, and revolutions garner the increase. We too have our workingmen’s questions, and no attempt at the solution of such questions can be without its interest.

No man in Europe has worked harder or more unselfishly for the peaceable solution of these questions than has Herr Schultze-Delitzsch, a man whose influence in Germany has been pronounced second only to that of Bismarck. His reputation is more than European—it is cosmopolitan; and that M. Benjamin Rampal offers to the French people in a French dress the chief works of a German writer who has publicly and by his pen vindicated the recent annexation of Elsass and Lothringen, shows what weight the man’s name carries in the economic and literary circles of France.

To show the importance of his author’s economic labors, M. Rampal sketches the history of political economy from the point of view of the welfare of the working classes. Among Adam Smith’s predecessors he finds in the *Physiocrates* a philosophic breadth of view which embraced this and every other aspect of social welfare. This judgment is pardonable in a Frenchman, but it would not be pardonable in us were we to repeat it without protest. It is easy to be “broad” at the expense of definiteness, and certainly the fanciful theorizings of the school of Quesnay are bits of colored mist that take nearly any shape—philosophic or philanthropic—that the observer’s eye may choose to give them. M. Rampal, for instance, finds them quite in the line of the grand march of liberal ideas, that has made Europe free and Democratic; but the poor *Physiocrates* themselves always proclaimed themselves the champions of the throne and the landed aristocracy, and the enemies of the *bourgeoisie*. In truth, their theories in no

way fitted into the actual life of this unphilosophical world. It was an economic philosophy for Nephelo-coccygia that they devised—not for the planet *Tellus*.

Adam Smith did write for the actual world that he lived in, yet M. Rampal is quite right in saying that in his work and in those of his disciples (Malthus, Ricardo, McCulloch, etc.), all economic questions resolve themselves into the problem how a nation can produce goods and wares, in the largest quantity, and at the lowest price. They released themselves from the special consideration of working-class interests by repeating a few platitudes about the interest of each being the interest of all. The school "founded a special science confined to the consideration of a single topic, and decidedly discarding any concern as to the fate of individuals, whom it considered only as instruments of labor. It sought only to know by what means a nation could come to produce more abundantly and cheaply than any other. It has analyzed very admirably the phenomena of production, pointing out with great sagacity the hindrances and helps thereto—what laws must be repealed and what passed, if industry were to flourish; it defined the best methods of managing great industrial establishments. Its labors are a permanent gain to political economy, whose scientific material—if I may say so—they are. But down to our own times, the school is lacking in philosophic views and a concern for the human material of industry.

"Under the influence of the teachings of the English school, there has been created a colossal industry, whose products cover the world, and whose immensity at once astonishes and saddens. It is a vast arena, where man, woman and child are flung headlong, like regiments into the jaws of battle—where the last word is the *Vae Victis* of Brennus. High above that eager and confused fray, whose result is the heaping up millions, rise the strong and the clever; dishonor and ruin strike the less gifted, and the masses, deprived of security, vibrate in times of crisis between death and emigration."

In Say and his disciples he sees only the followers and systematizers of Smith, while he justly credits the French economists of this school, especially Charles Dunoyer (*La Liberté du Travail*), with a spirited protest against the materialism of its English founders.

In Sismondi and what has been called the sentimental school, he sees the beginning of a reaction towards a more human treatment of the subject. The actual outcome of English theories in English practice forced thoughtful men, men with a heart, to ask if this was the necessary result of the economic organization of society, and if these laws of distribution were as necessary and inevitable as those of production. Especially in the writings of two French economists, usually reckoned of the English school, we mean Rossi and Blanqui, he finds an earnest and eloquent protest against the received doctrine that wages are to be adjusted to the minimum rate determined by the bare needs of the working man. Rossi proclaimed the whole wages system to be purely a conventional one, and exhorted the workingmen to unite in order to make better terms with capital.

To this transitional school we would also assign John Stuart Mill, whom M. Rampal reckons as one of the four new economists, the other three being Carey, Bastiat, and his hero Schultze-Delitzsch. We see nothing in all that is here quoted from his writings. to justify M. Rampal in regarding him as one who did more than utter a very hesitating and inconsequent protest against the notion that the laws of distribution are natural and necessary—nothing that puts him above or beyond Rossi. Nor did he propose any solution of the problem beyond a half-hearted suggestion of a socialistic reconstruction of society, which should, in some way unspecified, combine all the benefits and none of the disadvantages of socialism. His warm interest in the welfare of the working classes does great honor to his heart; but the long training in orthodox political economy was too much for his head. Save his partial conversion to Mr. Thornton's teachings on the labor question, we find no evidence of his reaching any advanced position on any of the great questions. His work was purely negative; even when he doubted and sowed doubt broadcast, he was open to no new light. His only choice was between the traditional doctrines and dreary blank of socialism.

And, again, we must reject M. Rampal's classification of the three remaining economists of the new era. He coördinates Carey with Bastiat, and Schultze-Delitzsch. As to the latter there need be no dispute; in earlier life he was one of Bastiat's disciples,

but in his more recent work gives his adherence to Bastiat's master, Carey. The position of Bastiat is, we believe, the same, and Mill also judges him in his departures from the orthodox tradition to have followed Carey. It is well known that this question caused a pretty lively discussion in economic circles in France some years ago; and out of regard for M. Bastiat's memory, and at the intercession of his friends, the point was not urged as it might have been. It was felt that the dispute could only give pleasure to the orthodox, who disliked Bastiat as much as Carey. M. Rampal belongs, we believe, to Bastiat's school; perhaps it is not too much to say that he constitutes that school in his own person. He seems anxious to avoid raking up the old issues; he admits that "Bastiat was acquainted with Carey's works. He borrowed of him, along with other ideas, that of the harmony of interests, and the theory of property taking its origin and deriving its right from labor. He starts immediately from that powerful and fertile innovator." We shall not insist on the extent of those "other ideas"—which we find afterwards to include Carey's "law of population." What M. Rampal says he borrowed from Carey seems to us to cover every departure that Bastiat ever made from the orthodox tradition. It certainly covers every word that is here quoted—all that he had to say of the rights of labor and of its relation to property. The ideas are, indeed, re-dressed so as to look new as well as brilliant; the masterly French style and the frivolous tone of all that Bastiat wrote, is here also. The truth is, that outside of his free trade pamphlets, Bastiat's work was the popularization of a part of Carey's doctrines for use in the polemic against French socialism. We regret to be obliged to utter with emphasis our dissent from a writer for whom we feel so much regard as we do for M. Rampal. But *magis amica veritas*.

M. Rampal's estimate of Carey is not only friendly but enthusiastic. "Carey is a philosopher who takes in whole complex of social phenomena, and whose genius addresses itself chiefly to economic facts. He casts upon them the light of his great and luminous intellect, and tries them by the standard of individual and social progress, which he never separates from each other, and without whose reunion the harmony of interests were an impossibility. It is in running through his works that we have the strongest presentiment of the destined future of his new economic

combinations." He discusses in some detail, and with large quotations, Carey's theories of harmony, of science, of population, of land and settlement, of trade and commerce, and of protection, and closes with a contrast of the doctrines of his writings, and those of the English school.

"The English school lay it down as a fundamental truth that landed property is a monopoly sanctioned by law. Carey replies that it can have had no other basis than labor, whose products are transmissible.

"The English school say that the tendency of population to increase faster than subsistence is a cause of pauperism. Carey asserts that in a well ordered and civilized community, the means of subsistence increase faster than the population, and that its density is a source of wealth.

"The English school maintain that the better lands are first occupied and cultivated, and the worse afterwards; and that consequently the rent of the soil should rise continually. Carey objects that the worse lands, on the contrary, are the first to be cultivated, and that the rent of the soil should fall as fast as the products of the soil are multiplied by the occupation of better lands.

"The English school declare that the wages of manual labor tend constantly to diminish, and the profits of capital in its various forms to increase. Carey shows that on the contrary wages tend to rise and profits of all sorts to fall.

"The English school urge the concentration of capital and of the soil in a few hands, and consider the go-betweens of commerce as useful producers who cannot be too numerous. Carey calls for fewer such go-betweens, the division of the soil, and a fairer distribution of its products.

"In a word, the English school put wealth above man. Carey puts man above wealth, and this amounts to nothing less than a partial rejection of the economic laws formulated by Adam Smith and his disciples."

We have given this contrast of views as the best introduction to the central figure in M. Rampal's very interesting work, Schultze-Delitzsch, the father of German co-operation, and the trusted and honored leader of the working classes of Germany. He is for Germany the chief representative of the new economical doctrines in the world of practice, as Dr. Dühring is their chief representative in the German scientific world.

For nearly thirty years Herr Schultze-Delitzsch has been a leader of the Liberal party in Prussia, although till his resignation in 1852, he was one of the superior judges of the Prussian judi-

ciary system. In the Frankfort Parliament of 1848, of which he was a member, he was selected to preside over the Commission appointed to consider the great mass of petitions that lay on the table, calling attention to the condition of the working classes. He had already, in the same year, signalized himself by his share in the resistance offered to the high-handed measures of the Tory ministry of Prussia, being one of those who refused to vote supplies until grievances were redressed. As soon as the political reaction set in he, with a great number of others, was tried for high treason, but acquitted. He was then banished to an obscure magistracy in a distant province, and being refused the usual vacation to visit his friends in Berlin and Prussian Saxony, he took it without leave. This led to such offensive acts on the part of the ministry that he sent in his resignation, and retired from the Prussian civil service.

From this time, he devoted himself to the promotion of unions for self-help among the working classes. From the time of his presidency of the Commission of 1848, his attention seems to have been turned in this direction, and even before his resignation he had organized one or two societies. He brought to the task executive talents of the first order. "The undeniable genius of Schultze consists especially in his profound acquaintance with the classes with whose condition he is concerned, so that he is able to give the happiest shape and expression to his reformatory ideas, and that too in an age when most of those who claim special acquaintance with the subject more than doubted their practicability. Still farther it consists in the audacity with which he utterly and recklessly devotes himself to his great aims, as well as in the unspeakable tenderness and patience which he exercises in carrying them out. Here, also, we must speak of original creations, and such that their success cannot help but raise our estimate of the German people's vitality and capacity for development."²

It is hard for an American to conceive the amount of informal but very effective opposition which the coöperative movement encountered on the part of government officials and the like. The

² Prof. W. Roscher's *Geschichte der National-Oekonomik in Deutschland*. München, 1874.

traditions of paternal and bureaucratic administration were too deeply embodied in the official mind to allow of any favor being shown to a movement that looked to individual workmen to take the initiative, without waiting for governmental leading-strings. As late as 1861, when Schultze-Delitsch re-entered the Prussian Parliament with all the prestige of his successes accompanying him, King William is said to have exclaimed, "We shall see, before all is over, whether of us two will win the day, Herr Schultze or me!"

At first the work was a very slow one; the very idea of union for any common purpose was utterly wanting to the German workingman, and the experience of 1848 has caused a reaction in this lower as well as in higher circles. In the first three years just seven associations were formed; in the first nine three hundred and forty.

But a period of still greater success was at hand. Hitherto our hero had fought nearly single-handed; even his old associates in the Liberal party had looked on with more than indifference, and suspected the new movement of socialistic tendencies. Happily just at this time (1863) an antagonist was found who assailed the co-operative movement from the Socialistic point of view, and thus wrought wholesome convictions in the minds of the Liberal party. Ferdinand Lassalle was a brilliant specimen of the Bohemian of genius, a class that since Byron's days had invaded nearly every other department of literature, but had hitherto kept out of the economic branch of it. A nominal convert from Judaism to Christianity, a Hegelian of the school of Ruge and Bruno Bauer, a man of much philosophic erudition, as may be seen by his treatise on Heraclitus, he was a brilliant and incisive intellect without the balance of a good heart or an active conscience. Like so many of the young Hegelians, he had cast off all regard for moral law. His life was one long scandal; his political writings a protracted squabble, in which no search after principles compensated for the ceaseless, destructive analysis that he brought to bear on all opinions. Being a man of great personal beauty and brilliant eloquence, lavish with his money, audacious and self-confident, he was just the sort of person to make an effective demagogue. Something of Heine, something of Alcibiades, and something of O'Connell were united to form a personality which in

its totality resembles that of Aaron Burr more closely than any other that we can recall.

In October 1862 Lassalle began his agitation by the delivery of a lecture in Berlin, which he afterwards reprinted as the *Arbeiter-programm* of a new era. From this date till May, 1864, his time was taken up with a rapid series of pamphlets, public meetings, lectures, prosecutions, such as might be supposed to have filled up ten or twenty years of an ordinary life. In August of 1864 he died of a wound received in a duel fought under circumstances most disgraceful to himself. Before his death, it is claimed "his tongue and pen woke up the German working-class at large," as they had not been aroused by "Schultze's many years of labor." Yet it is certain that the socialistic league he founded numbered barely ten thousand members, while under Schultze-Delitzsch's co-operative banner over 160,000 were marshalled.

The longest and the most important of his economic publications appeared in January, 1864, and was entitled *Herr Bastiat-Schultze von Delitzsch the Economic Julian; or Capital and Labor*, and was a reply to Schultze-Delitzsch's *Chapters for a German Workingmen's Catechism*, which had appeared the summer before. In 1866 Schultze replied in *A New Chapter*, and it is the translation of these two works that M. Rampal offers to French workingmen as a course of political economy, especially fitted for their use. Lassalle's work "is designedly unfair, abounding in suppressions of the true and suggestions of the false. It degrades controversy into a squabble, reasoning into invective. It has indeed its lessons. It teaches what culture is worth, without moral power All the various knowledge with which his mind was stored, all his brilliant and well-trained powers of mind only serve to exhibit to us the most perfect type in modern times of the ancient sophist. And the real source of Lassalle's measureless violence lies surely in this, that whilst Schultze is always seeking some moral ground to stand on, some moral end to reach to, Lassalle on the other hand, subject to no moral restraint whatever—utterly self-seeking, pulled only from side to side by the opposing influences of boundless ambition and boundless self-indulgence—cannot bear that any should start from moral responsibility as a principle, but must poison the working classes with specious instances to show that under the present economic conditions there

is no individual responsibility for one's own actions, that every one has only to answer for the actions of others." The book "turns mercilessly inside out more than one received doctrine of political economy. It mirrors alike all Lassalle's gifts and all his faults. Acute, powerful, true reasoning stands side by side with clumsy pleasantries, tedious wire-drawn logic, fallacies now too gross not to be sincere, now too subtle for us possibly to believe them so. Bursts of well-deserved indignation against some of the current hypocrisies of popular plutonomists. . . . lose their effect when we see the same indignation poured out upon his opponent, in cases where the critic has simply misrepresented him. . . . There are, I should think, few unprejudiced readers whom the unmeasured virulence of Lassalle's criticisms, the nauseous flood of his eloquence, would not dispose to sympathy with his victim, even if unaware of the difference in character between the assailed and the assailant."³

Lassalle in this, as well as in his other works, shows a pretty close acquaintance with the traditional political economy of the school of Malthus and Ricardo. Indeed, here and elsewhere he always puts in a claim to be regarded simply as a political economist, and never admits that he is in any sense a socialist. When Schultze-Delitzsch boldly charged him with "half-knowledge," he retorted that he was "armed with the whole culture of his age," and not untruly claimed to start from the recognized doctrines of the economists in all his social deductions. For after all, in Lassalle as in Mill, we see the English economic doctrines carried to socialist consequences that always were logically involved in the system. Accept the received theories of population, land and wages, and then admit that the chief economic object of government is the welfare of "the most numerous class, that is, the poorest," as all in this half of the nineteenth century must, and the reconstruction of all social and industrial relations in the direction of eliminating individual freedom of

³"Ferdinand Lassalle, the German Social-Democrat." By J. M. Ludlow. In *The Fortnightly Review* for April, 1869. Mr. Ludlow has evidently not read Schultze-Delitzsch's reply to Lassalle, else he would not merely class the former among the disciples of Bastiat, whom he describes (*more Britannico*) as a "brilliant but (except in respect to the one point of Free Trade) generally unsound and greatly over-praised thinker."

initiative, and substituting that of society, becomes inevitable. In Mill's case that consequence was forced upon him by his real concern for the poorer classes; in Lassalle's it was reached by the ratiocination of a brilliant intellect, and grasped as the instrument of a successful demagoguery. But it was not reached without assistance from other quarters; all the fundamental principles of his pamphlets and speeches are to be found in Karl Marx's treatise *On Capital*, under whom he studied the subject during the socialistic fever of 1848.

While fully agreeing with the Economists that socialism can never be anything but destructive, and while equally convinced that Lassalle was nothing but a socialist, we cannot, for the reasons given, refuse his claim to be regarded as the lineal successor of Malthus and Ricardo. We concede the claim with full knowledge of the immense difference between the *Laissez faire* inferences drawn by the economists, and the very opposite inferences drawn by Lassalle, from the principles common to both. False principles furnish no basis for intellectual stability and equilibrium; those who embrace them as the foundation of life's activities will always vibrate between opposite practical errors, as the Hindoo does between Shiva and Vishnu—either seeming the more probable according to the mood of the moment. *Laissez faire* and socialism are the Shiva and the Vishnu of orthodox political economy.

The one practical plan or suggestion of the man's pamphlets is State aid for workmen's associations. This, as he shows, is a legitimate inference from the teachings of the economists. The working man cannot help himself; all the progress of society in wealth produces a growing inequality of classes; the small number of monopolists who got the start of the rest by securing the legal monopoly of landed property, and the additional few who have fought their way up to wealth by securing the services of the working classes at "the natural and necessary rate of wages"—these will to the end of the chapter, by reason of the existing constitution of society, reap where they have not sowed and gather where they have not strewn;

*Sic vos non vobis œdificatis aves,
Sic vos non vobis mellificatis apes,
Sic vos non vobis lanificatis oves.*

The workingman is helpless, whether singly or in coöperation, as long as the existing economic constitution of society perpetuates itself; he is struggling, not with its accidents, but with its very essence; he is fighting against its law of gravitation. Therefore he must insist on a new order of things—on the abolition of business risks by the guarantee of society, and on the State's becoming the capitalist to supply the funds for new industrial enterprises, to be undertaken and managed by the working classes. He called upon the workingmen to contrast their own empty pockets with the vast capital needed to carry on the manufactories, railroads, and the like, that are now managed by private capitalists. That coöperative associations for production had already been successfully organized in Germany itself, no one would ever learn from his account of Schultze-Delitzsch's work.

To all this gospel of despair, Schultze-Delitzsch opposes himself utterly, attacking it not in its branches but its roots, not in its inferences but its principles. Practically he had already secured its refutation in the actual workings of his coöperative societies, which Lassalle had been forced to misrepresent and caricature, in order to make out a case. But he had thought and studied as well as acted in those years, and had reached principles which brought him into fundamental antagonism to the political economists whose disciple Lassalle not unfairly proclaims himself. He begins his *Chapters of a New Catechism for the German Workingman* with an analytical definition of *labor*, which he regards as the source of all wealth, and finds in the conception three necessary elements: a foreseen *need*, an *effort*, and its *satisfaction*. The animals do not labor, because their efforts are directed to supply present needs, or are governed by blind instinct. This analysis brings him to regard self-help as a part of that human responsibility, upon the discharge of which human society itself rests, and to demand for the workingman and in their interest the most complete freedom of labor as the correlative of this responsibility. As to the *means* of labor he finds the first and greatest in the voluntary co-operation of nature, which works in harmony with human nature. But labor, in the modern sense, is a large and complex operation. It requires raw material, tools, and temporary support for the workingman. In the savage state none of these were to be had; but we have emerged

from the savage state—largely, through the fact that we have made accumulations of past labor, called *capital*, which furnish labor with those three prerequisites. Alongside the great fact of labor, is this other of *commerce*, the interchange of the products of labor. Men can labor for others, and when they do so mutually, for one another, both parties to the exchange are the better served. Until this exchange begins, man's needs surpass his forces; through its growth, his forces surpass his needs. The isolation of the savage is poverty; the free association of citizen with citizen is the foundation of wealth; for only by united efforts are the resistances of nature overcome. Hence, arise those divisions of labor, which makes each workman more competent in his own sphere, and gives to each a larger liberty of free choice, and prevents the waste of the greater part of human toil. It is the basis of commerce between man and man, between country and country.

Passing to *capital*, which was already described as furnishing the prerequisites of well-directed labor, he says that it consists not of money only, but of all the useful accumulations of past labor—embracing as well the workingman's skill and experience as the loom-lord's factory. It is whatever result of labor has not been consumed in immediately satisfying personal needs, but is destined to be consumed in the production of other articles of value. Its aim is not hoarding or preservation, but multiplication by reproduction. As to its origin, it is accumulated by sparing and self-denial as to the products of productive labor, for labor is the source of all wealth; and by a constant reaction and social circulation, it returns to fertilize labor, and make it more productive, more able to save and spare new capital. All do not so save and spare, because the higher economic qualities are not shared by all; most are Esaus, ready to sacrifice any future advantage for present enjoyment; others are Jacobs, not more admirable persons, perhaps, in themselves, but gifted with the forethought that has in it the promise of the man. They succeed because it is in them to succeed, but even their success is due to labor, which "alone creates values,⁴ fixtures, capital." We have

⁴ Our author uses this term in the loose, popular sense, not scientifically. The object of industry is not to create values, but to reduce them.

seen that all commerce rests upon the right to transmit the products of labor from one owner to another. The same right extends to the products called capital. To deny the principle on which this rests would be to break up society, for if a man's possessions are his only for immediate and personal use, then all commerce or interchange of service is annihilated, and we relapse into the isolation of the savage. Equally clear is the right to charge *interest* for the loan of capital, for here also is the transmission to another of a benefit that might have been reserved to one's self. The principle of *credit*, which rests on this right, underlies the economic and industrial life of the modern world, and its destruction would be equally unwise and impolitic,—as our author shows by abundant illustrations, this being a favorite point of attack on the part of the socialists. But capital depends for its life and growth upon labor, as much as labor depends upon capital for its assistance. The two are equally necessary to each other, and their alliance in harmony is the first condition of wise production. The outlays of capital all go to the payment of labor—either of workmen directly employed, or of the producers of what they use as raw material, or of the makers of the tools, etc., that are needed. Even outlays upon objects that have no reproductive use are in payments of labor performed. The rise of *wages* depends on the growth of capital, though not on that alone; it is governed by the law of demand and supply. When two capitalists are competing for every workman, *i. e.*, when the abundance of capital is fostering and multiplying all sorts of productive industry, wages are going up, and *vice versa*. On the other hand, with the growth of capital prices fall, through labor being brought to greater perfection; the workingman's wages are greater in amount, while the prices of what he buys have fallen. The parallel changes in the methods of production call for brain-labor instead of mere muscular labor, and the higher work is the better paid. These changes bring temporary hardships, he admits, but shows by a long array of figures that the wages of English factory hands have risen steadily throughout our century. In its larger relations to society, capital represents the steady economic gain that goes on from generation to generation—a gain, both material and intellectual—which makes life more tolerable and easy to the children than to the fathers, and binds the

former to the latter by another of those bonds that make the life of humanity a continuous life. And here we stand at the opening of a great vista, whose *aperçus* into the future of the race are as astounding in the sphere of economic law as in every other.

His third discourse is taken up with *exchange, value* and *competition*. He makes the mistake of regarding the two former as inseparable ideas, showing that he has not yet grasped the scientific conception of value as the measure of nature's resistance to man's mastery of her services. He thus lays himself open to Lassalle's merciless and destructive criticism, especially when, with Bastiat, he seeks to base *value* upon *service*. The evil influence of Bastiat appears throughout this chapter, especially in its closing glorification of the principle of *free competition*, whose powers of promoting all interests he discusses in a style that was more usual in England thirty years ago than at present. Surely our author's own experience must have shown him that the absolute freedom of competing parties is continually exercised in forming agreements not to compete; that all industrial classes naturally tend to form implicit or explicit agreements as to the terms on which they will deal with others; that the wages of the workman and the price of every article that he buys at retail is as often fixed by these common understandings among employers and retailers, as by anything else. Indeed, why should workingmen unite to form unions of any sort,—trades' unions, co-operative stores, productive societies, and the like, if this principle of competition be capable of all the great things that he claims for it. Either this chapter is a series of fallacies, or all the practical services rendered by its author to the working-classes have been based on mistakes. It is easy to see where Lassalle found "the opening of the joints of the armor," and why even Ludlow classes our author as "but one of the worthiest of plutonomic Philistines."

Far better and more practicable is the fourth discourse on "The Ways and Means of Improving the Condition of the Working-Classes." He begins by a candid statement that in spite of the beneficent order that underlies society, the condition of the largest class in it—the working class—is anything but admirable. Wages are insufficient, and as a consequence the food, the homes, the general life, of the mass of men are capable of great improvement.

The workmen who, like so many in Germany, are their own masters, seem to be continually swamped by the competition of the large establishments; those who are already in the employ of the latter have a position neither remunerative nor stable, and still worse things may be expected when the factory system becomes as general in Germany as in England, and brings with it the same financial crises, the same vast extent of pauperism. If the working classes are to be kept human, and preserved in their self-respect, something more than acquiescence in the present drift of things is needed. As to remedies proposed, some would take the working classes back to the estate of constraint and dependence under new forms: others, of whom our author is one, have faith in freedom and self-help; the future of the workingmen is in their own hands. Private charity and *State aid* have their places in times of extraordinary suffering; but when the latter is adopted as a permanent means for any but those who are incapacitated for self-help, the nation has taken the first step toward bankruptcy. The self-respect of the German workingman—as yet uninjured by pauperizing relief laws—rejects with scorn such proposals. The French and English *socialists* propose that the State guarantee the material support of all citizens; they demand the direct interference of the State as the directrix of industry. Such plans, if adopted, would drive all movable capital out of the country, and with it the experience and the enterprise of its owners, and leave the State without the means of raising by taxation the funds for its new enterprises. It would lower the energies of the working class and deteriorate the quality of their work, by removing the motives which now direct them. Production will diminish in quality and quantity, and the support furnished to the whole body of the people will grow ever worse and less ample. A police the most vexatious will intrude itself into all departments of life; individual liberty will be at an end; every sort of political abuse will increase a hundred-fold. With personal independence will disappear the sense of personal responsibility, the cohesive principle that binds society in one. Out of the worst of despotisms would follow the worst of anarchies. Out of equality in wretchedness would grow worse inequalities of condition than now exist in society—the enslavement of the weak by the strong. We need not follow our author through his searching examination of the

socialistic formulas. He closes the chapter with the list of what the working class have a right to demand of the State for the promotion of industry—freedom of choice and of exercise of occupation, protection of the laws, security and peace, wise financial administration, good schools, equality before the law for all classes.

Continuing this discussion in the next chapter, he assails the restraints on commerce which exist between different parts of Germany and different classes of producers. At times he uses a breadth of statement which would seem to demand absolute freedom of all exchanges—international as well as national—but he has elsewhere disclaimed any opposition to the views of those American economists who regard protection as temporarily necessary for the development of the industries of a young country. He then passes to the discussion and defence of the general principles of *associated self-help* as the better way to the solution of the workingmen's problems. In connection with it, he again insists on the beneficence of the laws which underlie the whole economic structure of society, and which co-operate to aid in every effort of the working classes to help themselves.

The sixth and last chapter is occupied with the specific discussion of his own co-operative plans, which have, since this account was written, met with redoubled and still increasing success in Germany. His main theme is the right, duty and possibility of the whole body of workingmen, acting in voluntary associations, to do what the few individuals have done in the accumulation of capital by the exercise of economy in association with industry. He would have capital in the hands of the largest class instead of the smallest—not merely to insure the right of property against socialistic assaults, but to secure to the workingman the largest possible returns for his labor. Very much of his practical planning has little or no applicability except on the continent of Europe where *la petite industrie* still holds its own to a surprising extent. This is especially true of his most original and most successful form of co-operative institution, the *Vorschuss-Bank*, or *Volksbank*. Through the association of a vast body of workingmen, on the principle of mutual guarantee, a basis of credit is secured by which the individual workman is able to borrow the means of carrying on his industry on terms which would otherwise be im-

possible. His individual credit being good for little or nothing, he could only borrow at rates usurious enough to cover the risk of his death or sickness; but as only a small per centage of the whole association is likely to be sick or die, its credit is good enough to secure it the best of terms. The idea seems to have been borrowed from the Prussian Land-banks, established in Frederick's time at the suggestion of a Silesian, in which the estates of the province were pledged jointly, so as to cover any danger as to bad titles or other obstacle to the recovery of the money loaned. But in that case the government acted as the agent for the land-owners, received their pledges and guaranteed their loans, while in this case the *Volks-banken* negotiate their own loans with the help of a central agency at some great moneyed centre.

In Lassalle's view, it is the business of society, through its organ the government, to relieve the working classes of these risks and responsibilities of economic procedure; and therefore in his *New Chapter* our author addresses himself to this as the only pertinent objection that his opponent had advanced. Both agree that industrial associations are to control the economic world. Lassalle believes that only those that the State has guaranteed against risks and provided with capital can take that position; our author holds that the method of association for self-help is the sure though slower way to the same end. It was easy enough to show that Lassalle's plan would lead to steps utterly retrograde, and out of the line of all human progress, in which human freedom and individual responsibility grow steadily together—easy also to trace to their conclusions his rose-colored proposals for the future of the working classes. His examination of Lassalle's plans is at once searching and courteous—*suaviter in modo, fortiter in re.*

Most interesting to us is his retort to Lassalle's boast that he had "written every line armed with all the culture of his age." Schulze-Delitsch says:

"If any one object that the author's economic principles are destitute of authority, it might suffice to answer that those principles are established by the work of one of the most philosophic minds of our era, the celebrated American economist, Carey.

That work is entitled *Principles of Social Science*. It was finished in 1860. Some years later Dr. Adler gave it to us in German translation. (Munich, 1863-4; published by E. A. Fleischmann.) We recommend that work to the public as one of the most notable publications that have appeared in this branch of science.

“All of false and damnable that is contained in the economic theories of the modern English school, especially those of Ricardo and of Malthus, theories which furnish the starting point for the thesis maintained by Lassalle, here meets with a victorious refutation, and it is truly astonishing that our adversary, ‘armed with all the culture of his age,’ did not even know of the previous works of the eminent man who had discovered, more than twenty years before, a great number of truths which are to-day admitted as axioms in political economy.

“It is above all in this last of Carey’s works that these questions are treated with a depth and a largeness of view, which none of his predecessors had ever approached.

“For Carey, Political Economy is but a part of Social Science, *i. e.* of the science of man so far as he is especially intended for society. That science aims at determining the relations of the individual life to that of the community, and the intimate bonds that unite them; and consequently it embraces all the other sciences, by whose means man comes to understand the laws of his own being and those of external nature, and finally to become the master of nature and to make of her the instrument of his material and moral well-being. The American author, starting from the unity and connection of physical and social laws, connects the phenomena of society with the general laws of nature, which, in their simplicity and their universality, govern equally the movements of the physical world and the progress of human civilization. He shows, therefore, that the same eternal laws, which secure the perfect harmony of all parts of the universe, are equally designed to constantly develop the social relations of mankind, as these are brought ever nearer to perfection. To this end he points out:

“1. The highest perfection of each individual depends on the largest social development as a means.

" 2. That the largest liberty is balanced by the largest responsibility.

" As to the theories of Ricardo and of Malthus, which represent nature as in contradiction with herself in the creation of man, and in the relation of his powers to his wants, and which, against all reason and all experience, proclaim the backward march of civilization, and the gradual degradation of human condition, Carey shows irrefutably that those theories lead logically to the fatal consequence of the slavery of the working classes. It is to such suspicious sources that Lassalle must go for inspiration that he might come to the help of the workmen !"

ABRAHAM AND DIRCK OP DEN GRAEFF.¹

" Talking of old home scenes, op den Graaff
Teased the low backlog with his shodden staff,
Till the red embers broke into a laugh
And dance of flame, as if they fain would cheer
The rugged face, half tender, half austere,
Touched with the pathos of a homesick tear!" WHITTIER.

THE history of Pennsylvania is as yet unwritten. When the typical American of to-day, momentarily wearied with the chase after wealth, an establishment, horses, a footman, and all those things which represent his conception of prosperity and practical happiness, stops to inquire, if ever he does, concerning the men who founded his country, who they were and whence they came, and what were the causes which have influenced the development of its civilization, his thoughts invariably turn toward Massachusetts. Plymouth rock looms up before him vast and imposing, but the Delaware flows by unheeded. He is familiar with the story of the Mayflower, and her burden of strange folk destined to a barren shore is impressed vividly upon his imagination, but of the Welcome which sailed over the same sea, bearing a purer people to a better land, he has never heard a whisper. Why the chroniclers, who have so energetically and successfully tilled the one field,

¹ Many of the facts contained in this article have been obtained from Seidensticker's "Pastorius und die Grundung von Germantown."

should neglect the other, it is difficult to understand. Surely there is enough of romance to please the fancy, and much food for rugged thought, in the career of that son of a fighting old English admiral, who forsook the paths which seemingly led direct to fame and fortune, and, assuming the quaint ways and plain garb of a despised sect, preached its peaceful faith. Caleb Pusey, going out unarmed into the forest to meet a threatened attack of the savages, is a more heroic figure than blustering Miles Standish, girt with the sword he fought with in Flanders. Lloyd, Logan, and Pastorius, trained in the schools of Europe, and versed in all the learning of their day, were men whose peers are rarely found among colonists. The Quaker, the Mennonite and the Moravian, mindful of how their fathers were harried from place to place with the prison behind and the stake threatening before, bringing across the ocean with them their Bibles and often nothing else, with hearts warm enough and a creed broad enough to embrace the religious wayfarer and wanderer, as well as the negro and Indian, contrast favorably with the narrow and intolerant Puritan whose hand fell heavily upon all of different race, habits or belief from his own. Unfortunately, however, the German has been hard to assimilate, the Quaker repressed tendencies which seemed to him to partake of the vanities of the world, and the descendants of both have been slow to grope with the lamp of the historian amid the lives of their forefathers. Much which ought to have been preserved has therefore been irretrievably lost; but there still remain in neglected and out of the way places rich harvests to be garnered by the future investigator, when a higher culture and the growth of a more correct taste have taught him their value. After all the materials have been gathered and winnowed so that the true measure of the influence which has been exerted by the Quaker may be ascertained, he will thenceforth occupy the conspicuous position in the annals of the country to which he is entitled, but which he has as yet scarcely begun to attain.²

Of recent years, since the long-continued struggle with slavery in the United States ended in its overthrow during the rebellion, the protest against that institution sent by four German Friends of Germantown to the quarterly meeting in 1688, which was the first glimmering of the dawn of the contest, has grown to be famous.³ The men who prepared and signed this remarkable

document slumbered in almost undisturbed obscurity until the scholarly Seidensticker published his sketches, and Whittier using the material thus collected, gave the name of Pastorius to the world in his beautiful poem. It is a little sad that Pastorius, whose life in America was spent here and who belonged to a mental and moral type entirely our own, should become celebrated as the Pennsylvania *Pilgrim*, as if he could only obtain appreciation by the suggestion of a comparison with the men who landed at Plymouth; but no poet arose along the Schuylkill to tell the tale, and we must recognize with gratitude, if with regret, how fittingly others have commemorated the worth of one whom we neglected.

It is the purpose of this article to gather into one sheaf such scattered and fragmentary facts concerning the lives of two others of those four signers as have survived the lapse of nearly two hundred years. In the council of the Mennonite Church which set forth the eighteen articles of their confession of faith at the city of Dordrecht, April 21, 1632, one of the two delegates from Krevelt or Crefelt was Hermann op den Graeff. Of the antecedents of this Hermann, nothing is known. A tradition, current among some of the descendants, asserts that the family were French-Germans, but the name itself would seem to indicate a Dutch origin. A recent able writer upon the subject has suggested the query as to how far the founders of the Quakers were familiar with the doctrines of the German Anabaptists, and intimates the opinion that the former sect was an outgrowth of the latter.⁴ At all events, the plainness of dress and of speech, the opposition to warfare, lawsuits, and the taking of oaths, and other points of resemblance, rendered a transition from the one belief to the other comparatively easy, so that George Fox, Robert Barclay, and William Penn, found little difficulty in the establishment of Friends' meetings along the Rhine. The testimony of the yearly meeting at Amsterdam, 5 mo., 1693, says of Stephen Crisp, a

²To Abraham H. Cassel, of Harleysville, Pa., who has made it the purpose of his life to collect and preserve whatever relates to the German inhabitants of Pennsylvania, the descendants of the men of that race owe a debt of lasting gratitude.

³A recent authoress has tried to throw doubt upon the fact of these Germans being then Friends.

⁴Authoress of the Pennsylvania Dutch.

noted preacher, that "In the year 1667 he visited the small company of Friends then living at a place called Kreysheim in the Palatinate," and "Another time he made a journey into the County of Meurs to the town of Crevel, where a meeting was set up." *A priori* we would expect the first German emigrants to Pennsylvania to come from these towns, as was the case; and if we should make the farther inference that they were among the attendants at these Quaker meetings, we would probably not be far from the truth. When Pastorius had concluded to cross the ocean, in order, as he says, "to lead a quiet and Christian life," he visited during April, 1683, a number of his friends, to endeavor to persuade them to accompany him. At Cologne he found an acquaintance named Dotzen, who was willing, but he could not obtain the consent of his wife. The reasons she gave for declining were, that at home she went from place to place in a carriage, but in America "must she perhaps look after the cattle and milk her cows." Madame Dotzen was evidently a clear-headed woman, who was too wise to exchange her present advantages and comforts for the uncertainties of a distant wilderness. From Urdingen he went to Crefelt on foot, and there talked with Tunes Kunders and his wife, and with Dirck, Hermann, and Abraham op den Graeff, three brothers, who were presumably sons of the Mennonite delegate. Did they have some dim and vague consciousness of the great work which they and their children under the guidance of Providence were to perform? Was it given to them to catch a glimpse of what that little colony, planted in an unknown land thousands of miles away, was in the course of a few generations to become, or was the hope of a religious peace alone sufficient to calm their doubts and allay their fears? Six weeks later they followed Pastorius. At Rotterdam, on the way, on the 11th of June, they bought jointly from Jacob Tellner two thousand acres of land to be laid out in Pennsylvania. On the 6th of October, 1683, together with Lenert Arets, Tunes Kunders, Reinert Tisen, Wilhelm Strepers, Jan Lensen, Peter Keurlis, Jan Simens, Johannes Bleickers, Abraham Tunes and Jan Lucken, their wives, children and servants, in all thirteen families, they arrived in Philadelphia. On the 24th, in Germantown, they all drew lots for their respective locations, and immediately began to build the huts and dig the caves in which, with, as may be imag-

ined, considerable inconvenience, they passed the following winter. Germantown was laid out into fifty-five lots of fifty acres each, running along upon both sides of the main street, and in 1689 Dirck op den Graeff owned the second lot on the west side going north, Hermann the third, and Abraham the fourth, with another half lot further to the northward. All three were weavers of linen. Richard Frame, in a description of Pennsylvania in verse, published in 1692, refers to Germantown :

" Where lives *High German* People and *Low Dutch*
Whose Trade in weaving Linnen Cloth is much,
There grows the Flax, as also you may know
That from the same they do divide the tow ;"

and Gabriel Thomas, in his account of the "Province and Country of Pennsylvania," published in 1698, says they made "very fine German Linen, such as no Person of Quality need be ashamed to wear." It may be fairly claimed for Abraham op den Graeff that he was the most skilled of these artisans, doing even more than his part to have the town merit its motto of "*Vinum Linum et Textrinum*" since on the 17th of 9th mo., 1686, his petition was presented to the Provincial Council, "for ye Govr's promise to him should make the first and finest pece of linnen cloath." Upon a bond given by him to John Gibb in 1702 for 38*l.* 5*s.*, afterward assigned to Joseph Shippen, and recorded in the Germantown book, are, among others, these items of credit: "Cloth 32 yds @ 3*s.* 6*d.*" and "36¼ Linning @ 4*s.*," showing the prices at which these fabrics were valued.

On the 12th of 6th month, 1689, Penn issued to Dirck op den Graeff, Abraham op den Graeff, Hermann op den Graeff, called "Towne President," and eight others, a charter for the incorporation of Germantown, and directed Dirck, Hermann, and Tunes Kunders to be the first burgesses, and Abraham, with Jacob Isaacs, Johannes Cassel, Heifert Hapon, Herman Bon and Dirck Van Kolk to be the first committee-men. The bailiff and two eldest burgesses were made justices of the peace⁵. This charter, however, did not go into effect until 1691. Under it, afterward, Dirck was bailiff in the years 1693 and 1694, and Abraham a burgess in

⁵ Colonial records. Vol. I. P. 193.

⁶ Pennsylvania Archives. Vol. I. P. 3.

1692. Abraham was also elected a member of the Assembly for the years 1689, 1690 and 1692, sharing with Pastorius, who held the same position in 1687, the honor of being the only Germantown settlers who became legislators.

Their strongest claim, however, to the remembrance of future generations, is based upon the protest hitherto referred to, signed by Garret Henderich, Dirck op den Graeff, Francis Daniel Pastorius and Abraham op den Graeff. This historic document has been so often published that it is unnecessary to reproduce it. It may be seen in the *Grundung von Germantown*—a work which should be made more accessible—Watson's *Annals*, Evan's *Friends* in the XVII. Century, and other books, but in all, except the first, the name of Abraham is found distorted by an original misprint, which is ever faithfully copied, and almost destroys its identity. Two hundred years have added few arguments and little strength to the objections which it urges.

"Now, though they are black, we cannot conceive there is more liberty to have them slaves than it is to have other white ones."

"Or have these poor negers not as much right to fight for their freedom as you have to keep them slaves?"

"Now, what is this better done than Turks do? Yea, rather is it worse for them which say they are Christians."

The opinions of the writers are expressed in a sturdy and vigorous language, which, under the circumstances, was certainly remarkable. "But, to bring men hither, or to rob or sell them against their will, *we stand against.*"

It is probable, from the learning and ability of Pastorius, that he was the author of this protest, though there is no positive evidence of the fact; but it is reasonably certain that Dirck op den Graeff bore it to the quarterly meeting at Richard Worrall's, and his is the only name mentioned in connection with its presentation to the yearly meeting, to which it was referred as a topic of too much importance to be considered elsewhere. Perhaps, also, it should be observed that among the signatures, his name precedes that of Pastorius, so that if any significance whatever attaches to this circumstance, it may not be forgotten.

A short time after this earnest expression of humanitarian sentiment had been laid away among neglected records, awaiting a

more genial air and a stronger light in which to germinate, events of seemingly much more moment occurred to claim the attention of the Society of Friends. George Keith, whose memory is apostatized by them, and revered by Episcopalians, who had been one of the earliest and most effective of their preachers, began to differ with many of the leading members of the Society concerning questions of doctrine. In the nature of things, the defection of a man of such prominence was followed by that of many others. Dissension was introduced into the meetings and division and discord into families. In a quiet and peaceable way the warfare was waged very bitterly and many harsh things were said softly. Dirck op den Graeff adhered to the cause of the Friends, but Abraham and Hermann were among the disaffected, and the three brothers seem to have become more deeply involved in the controversies than any of the other Germans. The numerous public discussions which were held only served to confirm each faction in the correctness of its own rendering of the Scriptures; the Friends who were sent to deal with George privately and to indicate to him whither he was tending made little progress; and the difficulty having become too great to be appeased, twenty-eight ministers presented a paper of condemnation against him at the monthly meeting at Frankford. Dirck op den Graeff, a magistrate in the right of his position as a burgess of Germantown, was present at the meeting and must in some way have shown an interest in the proceedings, since Keith called him publicly "an impudent Rascal." Most unfortunate words! Uttered in a moment of thoughtless wrath, and repeated in the numerous pamphlets and broadsides which the occasion called forth, they returned again and again to plague their author. Beaten out in the fervor of religious and polemic zeal, they were construed to impliedly attack the civil government in the person of one of its trusted officers. Ere long, in reply to the testimony against Keith, the celebrated William Bradford printed "An Appeal from the twenty-eight Judges to the Spirit of Truth and true Judgment in all faithful Friends called *Quakers* that meet at this yearly meeting at Burlington, 7 mo., '92," signed by George Keith, George Hutcheson, Thomas Budd, John Hart, Richard Dungwoody and Abraham op den Graeff. The Appeal is, in the main, an attempt to submit to the people the question which had been decided against Keith by the

Ministers as to whether the inner light was not alone insufficient, but it closes with the following pointed and pertinent queries:

"9. Whether the said 28 Persons had not done much better to have passed Judgment against some of their Brethren at Philadelphia (some of themselves being deeply guilty) for countenancing and allowing some called *Quakers*, and owning them in so doing, to hire men to fight (and giving them a *Commission* so to do, signed by three Justices of the Peace called *Quakers*, one whereof being a Preacher among them) as accordingly they did, and recovered a Sloop, and took some Privateers by force of arms?

"10. Whether hiring men thus to fight, and also to provide the *Indians* with Powder and Lead to fight against other *Indians* is not a manifest Transgression of our Principle against the use of the carnal Sword and other carnal Weapons? Whether these called *Quakers* in their so doing have not greatly weakened the Testimony of Friends in England, Barbadoes, &c., who have suffered much for their refusing to contribute to uphold the Militia, or any Military force? And whether is not their Practice here an evil President, if any change of government happen, in this place to bring Sufferings on faithful Friends, that for Conscience sake refuse to contribute to the Militia? And how can they justly refuse to do that under another's Government, which they have done or allowed to be done under their own? But in these and other things we stand up Witnesses against them, with all faithful Friends everywhere.

"11. Whether it be according to the Gospel that Ministers should pass Sentence of Death on Malefactors, as some pretended Ministers here have done, preaching one day, *Not to take an Eye for an Eye* (Matt. v. 38), and another day to contradict it by taking Life?

"12. Whether there is any Example or President for it in Scripture, or in all Christendom, that Ministers should ingross the worldly Government, as they do here? which hath proved of a very evil Tendency."

There was enough of truth in the intimations contained in these queries to make them offensive and disagreeable. According to the account of it given by Caleb Pusey, an opponent of Keith, in his "Satan's Harbinger Encountered," when Babbitt had stolen the sloop and escaped down the river, the three magistrates issued a warrant in the nature of a hue and cry, and a party of men went out in a boat and captured the robbers. As they were about to depart, Samuel Carpenter, a leading and wealthy Friend, stood up on the

⁷ A mutilated copy of this appeal is in the Friends' library on Arch street above 3d.

wharf and promised them one hundred pounds in the event of success. Doubtless they used some force ; but to call them militia, and the warrant a commission, was, to say the least for it, quite ingenious on the part of Keith. The appeal had the effect of converting what had hitherto been purely a matter of Church into one of State. Bradford and John McComb were arrested and committed for printing it, but were afterward discharged. Keith and Budd were indicted before the grand jury, tried, convicted and sentenced to pay a fine of five pounds each. These proceedings caused as much excitement as our placid forefathers were capable of feeling, and became the subject of universal comment. The justices, Arthur Cooke, Samuel Jennings, Samuel Richardson, Humphrey Murray, Anthony Morris and Robert Ewer met in private session on the 25th of 6 mo., 1692, and issued the following proclamation of warning and explanation :

“Whereas, the government of this Province, being by the late King of England’s peculiar favor, vested and since continued in Governor Penn, who thought fit to make his and our worthy friend, Thomas Lloyd, his Deputy Governor, by and under whom the Magistrates do act in the government, and whereas it hath been proved before us that George Keith, being a resident here, did, contrary to his duty, publicly revile the said Deputy Governor by calling him an impudent man, telling him he was not fit to be a Governor, and that his name would stink, with many other slighting and abusive expressions, both to him and the magistrates : (and he that useth such exorbitancy of speech towards our said Governor, may be supposed will easily dare to call the Members of Council and Magistrates impudent Rascals, as he hath lately called one in an open assembly, that was constituted by the Proprietary to be a Magistrate) and he also charged the Magistrates who are Magistrates here, with engrossing the magisterial power into their hands, that they might usurp authority over him : saying also, he hoped in God, he should shortly see their power taken from them : All which he acted in an indecent manner.

“And further, the said George Keith, with several of his adherents, having some few days since, with unusual insolence, by a printed sheet called an Appeal, etc., traduced and vilely misrepresented the industry, care, readiness, and vigilance of some magistrates and others here, in their late proceedings against the privateers Babbitt and his crew, in order to bring them then to condign punishment, whereby to discourage such assemblies for the future ; and have thereby defamed and arraigned the deter-

mination of the principal judicature against Murderers; and not only so, but also by wrong insinuations have laboured to possess the readers of their pamphlet, that it is inconsistent for those who are Ministers of the Gospel to act as Magistrates, which if granted, will render our said proprietary incapable of the powers given him by the King's letters patent, and so prostitute the validity of every act of government, more especially in the executive part thereof, to the courtesie and censure of all factious spirits, and malcontents under the same.

"Now forasmuch as we, as well as others, have borne and still do patiently endure the said George Keith and his adherents in their many personal reflections against us and their gross revilings of our religious Society, yet we cannot (without the violation of our trust to the King and governor, as also to the inhabitants of this government) pass by or connive at, such part of the said pamphlet and speeches, that have a tendency to sedition and disturbance of the peace, as also to the subversion of the present government, or to the aspersing of the magistrates thereof. Therefore for the undeceiving of all people, we have thought fit by this public writing not only to signify that our procedure against the persons now in the Sheriff's custody, as well as what we intend against others concerned (in its proper place) respects only that part of the said printed sheet which appears to have the tendency aforesaid, and not any part relating to differences in religion, but also these are to caution such who are well affected to the security, peace and legal administration of justice in this place that they give no countenance to any revilers and contemners of authority, magistrates or magistracy, as also to warn all other persons that they forbear the further publishing and spreading of the said pamphlets, as they will answer the contrary at their peril."⁸

"What we intend against others concerned," would seem to imply that a bolt was being forged over the heads of Abraham op den Graeff and the remaining three signers of the insolent pamphlet; but it was never discharged. The yearly meeting at Burlington disowned Keith, and this action the yearly meeting at London confirmed. Dirck op den Graeff was one of those who signed the testimony against him and one of those giving a certificate to Samuel Jennings, who went to London to represent his opponents. Hermann op den Graeff, on the other hand, was among a minority of sixty-nine, who issued a paper at the yearly meeting at Burlington, favoring him. The results of this schism were extensive and grave. It placed a weapon in the hands of the enemies

⁸Smith's History in Hazard's Register. Vol. vi. P. 281.

of Friends which they used in Europe, as well as here, without stint. Ecclesiastically it led to the foundation of the Episcopal Church in Pennsylvania. Politically it threatened to change the destinies of a Commonwealth, since it was one of the principal reasons assigned for depriving Penn of the control of his province.

The incorporation of Germantown rendered necessary the opening of a court. In its records may be traced the little bickerings and contentions which mark the darker parts of the characters of these goodly people. Its proceedings conducted with their simple and primitive ideas of judicature, written in their quaint language, are both instructive and entertaining, since they show what manner of men these were, whose worst faults appear to have consisted in the neglect of fences and the occasional use of uncomplimentary adjectives. From among them is extracted whatever, during the course of about thirteen years, relates to the Op den Graeffs.

1696. "The 3d day of the 9th month, before the persons constituting this Court of Record, proclamation was made and the overseers of the fences did present as insufficient the fence of Hermann op den Graeff, Abraham op den Graeff, Isaac Jacobs, Johannes Pottinger, Lenert Arets and Reinert Tyson."

"The 6th day of the 9th month, after proclamation, the overseers of the fences being appointed to appear before this Court, did present as yet insufficient the fence of Hermann op den Graeff, Abraham op den Graeff, Isaac Jacobs and Johannes Pottinger."

"James de la Plaine, Coroner, brought into this Court the names of the jury which he summoned the 24th day of 4th month, 1701, viz: Thomas Williams, foreman; Peter Keurlis, Hermann op den Graeff, Reiner Peters, Peter Shoemaker, Reiner Tyson, Peter Brown, John Umstat, Thomas Potts, Reiner Hermans, Dirk Johnson, Hermann Turner. Their verdict was as followeth: We, the jury, find that through carelessness the cart and the lime killed the man; the wheel wounded his back and head, and it killed him."

1700-1. "The 7th day of the 9th month, Abraham op de Graeff and Peter Keurlis were sent for to answer the complaints made against their children by Daniel Falckner and Johannes Jawert, but the said Abraham op de Graeff being not well and Peter Keurlis gone to Philadelphia, this matter was left to the next session."

20th of 11th mo., 1701. "The sheriff complains against Abraham op de Graeff's son Jacob, for having taken a horse out of his custody. The said Jacob answers that he brought the horse thither again. The Court fined him half a crown, besides what his father is to pay the Sheriff according to the law of this corporation."

"The sheriff, Jonas Potts, gave Abraham op de Graeff the lie for saying that the said sheriff agreed with Matthew Peters to take for his fees 7s. 6d., which upon acknowledgment was forgiven and laid by."

Dec. 28, 1703. "Abraham op de Graeff did mightily abuse the Bailiff in open court, wherefore he was brought out of it to answer for the same at the next Court of Record."

21st of 1st mo., 1703-4. "Abraham op de Graeff being formerly committed by James de la Plaine, Bailiff, for several offences mentioned in the mittimus, and the said Abraham having further, with many injurious words, abused the now Bailiff Arent Klincken in open Court of Record, held here at Germantown, the 28th day of December, 1703, was fined by this present Court the sum of two pounds and ten shillings, and he to remain in the Sheriff's custody until the said fine and fees be satisfied."

13th of 4th mo., 1704. "The action of Mattheus Smith against Abraham op de Graeff was called and the following persons attested as jurymen, viz: Paul Wulff, Tunes Kunders, William Strepers, Dirk Jansen, Jr., John Van de Wilderness, Dirk Jansen, Sr., Walter Simens, Henry Tubben, John Smith, Lenert Arets, Hermanus Kuster and Cornelius Dewees. The declaration of Matthew Smith being read, the answer of the defendant was that he proffered pay to the plaintiff, but that he would not accept of it, and brings for his evidences Edward Jerman and Joseph Coulson, who were both attested and said that Abraham op den Graeff came to the ordinary in Germantown, where Matthew Smith was and told to the said Smith that he should come along with him and receive his pay, and that he said Abraham had scales at home; but Smith did not go. The plaintiff asked the said German and Coulson whether they heard the defendant proffer any kind of payment; they both said no. The jury's verdict was as followeth: The jury understand that Matthew Smith refused the payment which Abraham has offered, the said Matthew is guilty; but

Abraham must pay the sum which the arbitrators has agreed upon. Paul Wulff, foreman."

Oct. 3, 1704. "The action of Abraham op den Graeff, against David Sherkes, for slandering him, the said Abraham, that no honest man would be in his company, was called, and the bond of the said David Sherkes and Dirck Keyser, Sr., for the defendant's appearing at this Court was read; the cause pleaded, and as witnesses were attested Dirck Keyser, Sr., Dirck Keyser, Jr., Arnold Van Vosen and Herman Dors, whereupon the jury brought in their verdict thus: We of the jury find for the defendant. The plaintiff desired an appeal, but when he was told he must pay the charges of the Court and give bond to prosecute he went away and did neither."

Dirck died about May, 1697, leaving a widow Nilcken or Nieltje, but probably no children. Hermann about September 29, 1701, removed to Kent county, in the "Territories," now the State of Delaware, and died before May 2d, 1704. In a deed made by Abraham in 1685 there is a reference to his "hausfrau Catharina," and May 16, 1704, he and his wife *Trintje* sold their brick house in Germantown. Soon afterward he removed to Perkiomen, and traces of the closing years of his life are very meagre. Of the two thousand acres purchased by the three brothers from Tellner, eight hundred and twenty-eight were located in Germantown and sold, and the balance, after the deaths of Dirck and Hermann, vested in Abraham through the legal principle of survivorship. He had them laid out in the Dutch Township fronting on the Perkiomen, where he was living April 6th, 1710, and where he died before March 25th, 1731. On the 27th of August, 1709, he gave to his daughter Margaret and her husband Thomas Howe, a tailor of Germantown, three hundred acres of this land. In consideration of the gift Howe "doth hereby promise to maintain the within named Abraham op den Graeff if he should want livelihood at any time during his life, and to attend upon him and be dutiful to him." It is to be hoped that this covenant was more faithfully kept than sometimes happens with such promises when men in their old age drop the reins into other hands. His children beside Margaret, were Isaac, Jacob, and Anne, wife of Hermann In de Hoffen. In their youth he sent Isaac and Jacob to school to Pastorius. It is probable

that after the Keith difficulty he did not renew his association with the Friends, and that his remains lie with those of the In de Hoffens (Dehaven) in the Mennonite graveyard on the Skippack near Evansburg. His name has been converted into Updegraff, Updegrave and Updegrove, but those who bear it are not numerous.

The fine traits of character displayed by the German settlers of Pennsylvania in their fortitude under persecution abroad, and their persistent energy in overcoming the difficulties they encountered in a new land, among a strange people, speaking a different language, have met with little recognition. Their peculiarities have attracted more attention than their thrifty habits and correct morals. The events of their lives, though they might often teach a lesson well worthy of our remembrance, have been buried in oblivion. And a hard fate, more malicious in its mischievousness than the gnomes of their native mountains, has, in many instances, by awkward and grotesque attempts at anglicization, which leave no traces of the original, obliterated their very names from the face of the earth.⁹

SAML. W. PENNYPACKER.

SOCIAL SCIENCE AND POLITICAL ECONOMY.¹

THE necessity of establishing a scientific basis for our own theory of a national policy, has long been an acknowledged want in our colleges and universities. Even in those of them where the science of Political Economy was taught in consonance with the views that predominate in our own National Legislature, few or no text books were to be had, other than those that set forth, as if beyond the pale of discussion or the possibility of contradiction, the free trade doctrines of the English school of economists. Even then, when the teacher sought orally to enforce the more wholesome truths of our American school, the pupil had

⁹For example: Bromberg has become Brownback. Bossert is now Buzzard, and Rieser, a giant, is changed into Razor.

¹*Social Science and National Economy*, by Robt. Ellis Thompson, M. A., Professor of Social Science in the University of Pennsylvania. Philadelphia: Porter & Coates. 1875. Pp. 415.

only his occasional hour of instruction, while the ordinary text books were always at his side, almost of necessity precluding anything like a reasonable exercise of an immature judgment on the topics most at issue. It was in his effort to bring home to his own hearers, students of the University here, the leading principles of our national theory of economy, and to make a lodgment of the great truths at its basis, that Professor Thompson found and seized the opportunity to supply a work which should be a text-book on the subject, readily at hand alike for teachers and pupils, and for that still larger circle of readers who seek a foundation in science for their own actual experience of the injury inflicted by a too ready credence to the great English authorities, as well as a means of meeting the insidious arguments so ingeniously pressed into service in the current controversies of the day.

The use of the *Penn Monthly* as a vehicle for the publication of various portions of the present volume in its progress to completion, and the relations of its author to this journal, naturally enforced silence in our own pages, until the other and leading representatives of cultivated and critical public opinion had first spoken. This they have done in the brief interval since the publication of the book, and in no uncertain tone. As a rule, the criticisms have been in the very highest degree flattering to the author, and that even in cases where the doctrines enforced by him were most strenuously denounced. A curious instance of the degree to which this respect for the author and dislike for his theories could be combined, was exhibited in the *New York Nation*—which is nothing if not free trade, and that without any reserve or restriction—where a long leading notice almost exhausted praise in reference to the industry with which so many and such varied sources of information had been consulted, and in general commended the execution of the task, while it certainly deplored the fact that it had been done; yet a little after, the further fact that the book had been especially commended by a leading organization of manufacturers, served to excite a short, sharp, caustic sneer, at variance with its former praise, and evidently inspired rather by the mercantile interests that are back of so many of our New York contemporaries, than by the cool judgment, the calm criticism, and the almost colorless impartiality of

the *Nation* in its discussion of subjects of a purely political nature. In other journals, the questions at issue received a fair share of discussion, and generally the book has been taken in hand in a spirit that shows how well it answers its main purpose.

It is not without interest to note how the title of this volume marks the difference between the English doctrine of Political Economy, as exhibited in that doubtful phrase, and our own broader scope of "Social Science and National Economy." In other words, instead of limiting the field of discussion to the questions of the three rubrics, Production, Distribution and Consumption, our American school recognize Social Science as that branch of the science of man which treats of man as existing in society, and in relation to his material wants and welfare, and put Political Economy in its lesser place, as the related art by which this science is carried into practice. The foundations of this broader and better science may be traced in the writings of Adam Smith and Bishop Berkeley, but they were first consciously established by the recognized German authorities, and they were fully and fairly laid down at last by Mr. Henry C. Carey, whose writings present a body of economic teaching that rests on a few great and simple principles, drawn from life itself, and capable of direct application to any practical question. Following Mr. Carey's rule, Professor Thompson has discussed, as preliminaries necessarily incidental to any proper consideration of the actual condition of National Economy, the ethical and partly metaphysical grounds at the basis of Social Science, in successive chapters on the Development of Society, and the nature, origin, vocation, method and goal of National Progress, and on Health and Nature, following this by considering the science and economy of Population, the National Economy of Land, of Labor, of Money, of Finance and Taxation, of Manufactures, and of Intelligence and Education, as the crowning good of all successful national greatness.

Perhaps the most successful leader in practical application of the comparatively modern theories of association as a means of progress, is Schulze-Delitzsch, the founder of the great industrial organizations which have done so much to secure the prodigious development of Germany within the last few years. Professor Thompson cites, with happy effect, his eloquent praise of Mr. Carey, as "the discoverer of a great number of truths that are now

accepted as axioms in Political Economy." In no respect is the national school more distinguished from the English or strictly commercial theory of Political Economy, than by its urgent aspiration for the improvement of the workingmen of all industries, by means of wise legislation, as contrasted with the doctrines of Ricardo and Malthus and Mill, in favor of the necessity and naturalness of a low rate of wages. A paternal government can do little to relieve the bulk of its population of the heavy burthen of poverty, so long as its legislation is entrusted to those who keep up a continuous conflict between labor and capital, always giving to the representatives of the smaller class its powerful help in the contests that are incidental to class legislation, such as goes to make up the bulk of the voluminous British Statutes, and the burthen of the constant additions that Parliament annually makes. Even the efforts of the most earnest philanthropists and their success in securing, now and then, some reform in the hours of labor or in the ages of working children, can produce little permanent good, so long as the one doctrine taught in the universities, enforced in the press, and accepted by statesmen, rests upon a false conception of the duty of the government towards its real producing classes.

The same earnestness that marks Mr. Thompson's energetic dissent from the false theories of the English school of economists, marks his energetic praises of the management of the English banking system and its relations to a sound currency and a wholesome state of trade. Instead of leaving the important questions of the money market to be dealt with as if they were separate and apart from the great interests and industries of the country, Professor Thompson manfully grapples with the modern panacea for our financial troubles, the National Banking System, and shows that while a national currency has great advantages, the National Banks are based upon an imperfect notion of the use and value of credit, and tend rather to accelerate than retard the centralizing tendencies of the national money market, making New York the one great monetary centre of the country, and thus exposing capital to the shocks of every local influence, instead of bringing it to the less developed and less wealthy districts of the country. The establishment of a national clearing-house is advocated as a means of cheapening, simplifying and adding security to our domestic

trade, as serving to reduce the amount of money needed for the business of the country, and as enabling us to obtain some such safety-valve as the Bank of England, with its power to meet panics by temporary expansion. For all purposes of subscriptions to national loans, of utilizing the earnings of the working classes by establishing Savings Banks like those connected with the English Post Office, of enabling the government to disburse its interest promptly, such an institution, purely a bank of accounts and not of trade either in money or commodities, would be an invaluable gain.

Professor Thompson, in his chapters on *The Science and Economy of Manufactures*, boldly crosses swords with the champions of free trade, both foreign and domestic, and takes up and answers, point after point, each of the grounds upon which we are summoned to surrender our protective tariff to the delusive promises of being clothed and supplied with every article needed, by English manufacturers at their own prices. For the sake of the mere gain in the first cost of manufactured articles, admitting that as based on the current rate of wages in England, we are called upon to sacrifice our effort to secure that which has given England its preëminence in trade, that varied industry, which is the crowning mark of a civilized people. One after the other of the Continental nations has seen its leading pursuit transferred to English soil, by reason of the wise protection and fostering policy of the greatest English statesmen. The Dutch lost their control of the high seas and the carrying trade of the world by the Navigation Acts enforced by Cromwell; the woolen and iron and dyeing and other foreign industries were acclimated in England by taking wise advantage of Catholic persecution of Protestants, who came as refugees from the Low Countries and France, bringing with them their skill in trades, and receiving substantial protection so long as it was needed to secure the struggling industries strength enough to hold their own against the world. After centuries of sedulous cultivation of iron and cotton, and all her other great material industries, with capital gathered together from all the rest of the world, with machinery to do the work of four hundred and fifty-millions of work-people, with improved means of communication to control every port and outlet of foreign produce, England now proclaims herself the apostle of free trade, and

finds in our great importing centres, in our leading newspapers, and in the representatives of both in Congress, a chorus always ready to repeat and renew the flattering promise to give us all we need, if we will only remove or reduce our tariff. As against this consensus of authority, English and American—and it has fast hold of all the great English universities and of not a few of our recognized seats of learning and instruction, (thanks to the well-directed liberality of the great merchants of New York,) Professor Thompson, first in his chair in our own University and now in his new volume, puts in strong, emphatic, well digested and well considered propositions, the reasons for the faith that makes us urgent for our own industrial independence. It is hard to summarize or abbreviate his arguments or his statements of facts upon which he founds his reasoning; for he has made out his case in a pithy, brief and authoritative recital of the actual history of the existing state of the contest between Free Trade and Protection throughout the world, establishing as an irrefragable conclusion that *the progressive peoples are in every case those who have fostered and protected national industry by national legislation!* The history of American industry begins with the independence of the nation, and the approaching centennial anniversary of that event will be fitly marked by an exposition which is to exhibit to the world the progress of art and industry, of manufactures and inventions, of education and culture, all of which are largely due to the protection given to our national interests by our national legislation. The sketch of our legislative history supplied by Professor Thompson is of the utmost importance, as exhibiting alike to students and to men of mature years, a record that carries with it the evidences of our industrial vitality and of the vastness of our resources, of the development that has attended every wise enactment, and of the injury done by every piece of legislation secured in the interests of our great industrial rival and her busy agents. If the progress of the natural sciences deserve, as it has received, a vast endowment, to enable the scientific school of the University to do its share towards the proper instruction of future mining and railroad engineers, of chemists and metallurgists, of skilled workmen in all our practical industries, and of those who mean to devote their lives to abstruse studies in natural history—shall nothing be done to equip our future merchants and manufacturers,

our lawyers and legislators, our teachers and editors, for the contest which is yet to be fought out between our own national economy and that of Great Britain? We believe that the publication of Professor Thompson's work will serve its best purpose, in attracting to the subjects treated of in it—the attention of those who have as large an interest in advocating and enforcing the true principles of social science and national economy, as our great industrial establishments have in securing experts in their various branches. Indeed, to what end shall our young men be trained for the better development of our great natural resources, if these are to be crushed out by a legislative policy that threatens in the future, as it has succeeded in its efforts in the past, to close our furnaces, to stop our factories, to destroy our machine shops, in order that we may all turn into hewers of wood and drawers of water—may leave all other employments to our English rivals, and tamely go back to the halcyon days when all men on this side the ocean shall be farmers, except the agents of the English manufacturers and capitalists in New York!

NEW BOOKS.

STORMS, THEIR NATURE, CLASSIFICATION AND LAWS. By William Blasius. 8vo. Price \$2.50. Porter & Coates. Philadelphia.

Of all the branches of Natural Science, perhaps none possesses such attraction for the general student as Meteorology. One reason for this is the grandeur of the phenomena to be studied, and the immense scale upon which they are presented to us. Another is the evident practical value which attaches to a knowledge of the laws governing the atmospheric forces and movements. Yet there is no subject which possesses less of a claim to the name of a science, and which appears in such a hopelessly chaotic and confused condition. This is not for want of patient and long-continued effort on the part of eminent men of science. As Proctor says, "At vast expense, millions of records of heat, rain-fall, winds, clouds, barometric pressure and so on have been secured, but hitherto no law has been recognized in the variations thus recorded—no law at least from which any constant system of prediction for long periods in advance can be deduced."

Why then have the results been so disproportionally small in this particular science? A fraction of the effort made here, applied to other branches of study, would have yielded the noblest fruit. Scientific men are beginning to recognize that there has been something wrong in the method of investigation. Sir W. Herschel says, "In endeavoring to interpret the weather, we are in the position of a man who hears at intervals a few fragments of a long history, related in a prosy, unmethodical manner. A host of circumstances omitted or forgotten, and the want of connection between the parts, prevent the hearer from obtaining possession of the entire story."

In the book before us, Prof. Blasius starts out with an entirely different method of observation. As he says,¹ "My researches were not made by filling out the ordinary meteorological formulæ from observations made three or four times a day, as is the custom. I had learned that no storm would be accommodating enough to develop itself just at the specified periods for observing; and I do not believe that this method will ever lead to any definite results. . . . A storm must be treated as an individual, which is subject to development. This is difficult, on account of the nature of the subject, but it is possible and essential. We must take the storm at its earliest appearance, and not lose sight of it for one moment, until we know it throughout its whole extent, in all its parts, from beginning to end."

Some twenty-four years ago, while a student of Agassiz at Cambridge, his attention was drawn to this subject by the occurrence of a tornado, which passed over the district to the west of Cambridge. He examined the track of its devastation, and commenced a study on the whole subject of its origin and development. Continuing the study for some time, he was led to a theory of storms in general, which he published in the *New York Times* of Nov. 18th, 1852, and developed in public lectures delivered about the same time. The twenty years that have intervened, while they have only served to confirm him in the general points there laid down, have enabled him to put to the test of experience the principles involved.

His classification is as follows:

1. *Local or Vertical Storms*—Stationary. Centripetal. Produced by a tendency of the atmosphere to re-establish in a vertical direction an equilibrium that has been disturbed. *Characteristic cloud*—*Cumulus*.

2. *Progressive or Lateral Storms*. Traveling. Produced by a tendency of the atmosphere to re-establish in a lateral direction an equilibrium that has been disturbed. They are of two kinds:

(a) *Equatorial or Northeast Storms*. Winter storms. Pro-

¹Page 25.

duced by a warm current displacing a cool one to supply a deficiency toward the poles. Temperature changing from cool to warm. Direction to the northeastern quadrant. *Characteristic cloud—Stratus.*

(b) *Polar or Southeast and Southwest Storms.* Summer storms. Produced by a cool current displacing a warm one to supply a deficiency toward the equator. Temperature changing from warm to cool. Direction to the southern semi-circle. *Characteristic cloud—Cumulo-Stratus.*

3. *Loco-progressive or Diagonal Storms.* Traveling locally. Rotatory (tornadoes, hail storms, sand-storms, water-spouts, etc.), Produced by a tendency of the atmosphere to re-establish the equilibrium of a *polar storm*, which has been disturbed in the place of meeting by a peculiar configuration of the ground. Direction: the diagonal of the forces of the two opposing currents, transversely through the polar storms. *Characteristic Cloud—Conus.*

It will be observed that in this scheme the appearance of the clouds accompanying or preceding a storm is made the most important thing, and the one to be most carefully studied. In this respect, his system differs fundamentally from the prevailing methods. The stronghold behind which they intrench themselves is the varying record of the barometer, as showing the approach of changes in the weather. Thus Scott, of the English meteorological office, says:² "What are now the signs of a storm and when do we issue warnings? We are, perforce, driven to use the barometer mainly, as it is an instrument more closely related to the direction and force of the wind than the thermometer, and one whose daily range is trifling; but, as we have seen already, if we trust it alone, we shall hardly ever be certain about a storm, and the thermometer will not help us much. We have then other signs, such as shifts in the direction of the wind, an increase of sea, and all the manifold local indications in the atmosphere given by the character of the clouds, and the transparency of the air, which are invaluable as collateral information, but require a practiced eye to discern them. If it were possible to place our office, with its present telegraphic facilities, on the west coast of Ireland, we might fairly hope to foretell five-sixths of the storms which strike us. On two separate occasions, I have been in the district in question, and knew perfectly from the look of the sky that a storm was coming, some hours before the barometer began to fall, and consequently long before the office here could issue warnings."

Blasius gives the following as his estimate of the importance of

²Fortnightly Review, May, 1873, p. 616.

the two methods of observation:³ "We have shown that the barometer is valuable as an indicator chiefly in local storms alone, and that even then the formation of cumuli will tell the tale almost as soon. It is next of value in predicting north-east storms, but it is here generally a day at least behind the clouds. In the south-east and loco-progressive storms it only begins to show the storm when it has already to a great extent passed by, and hours after it has been revealed by the clouds.

"It is thus in only the most insignificant of the storms of the temperate zone that the barometer gives warning in advance of the clouds, and in the most dangerous and destructive it gives no warning at all."

We have mentioned that Prof. Blasius was first led to his study of this subject by an analysis of the West Cambridge tornado in 1851. Although he does not consider the tornado as belonging to one of the main types, but rather as an off-shoot of the polar or south-east storm, the generation of which depends upon the physical geography of any region, yet it was here that he came most sharply in conflict with the prevailing theories. Redfield's rotatory theory, which considers the tornado exclusively as a whirl of air-currents, and Espy's in-blowing theory, which considered the winds as all blowing in to a common centre, were the two which divided the meteorological camp. Blasius' theory differs from both—from Redfield's fundamentally, in that the whirl is proved to be only a minor feature of the tornado, and one developed during its progress; from Espy's, in that it goes further and shows the cause of the in-blowing, and in that it disproves the idea of the region affected having a circular form, and substitutes for it an elliptical one.

Blasius' definition of a storm may be given, as showing the keynote of all his explanations. He says,⁴ "I understand by a storm in general the *movement of the air caused by its tendency to re-establish an equilibrium, which has in some manner been disturbed*; and we may call all such movements storms, whether they are gentle breezes or furious hurricanes, whether they are accompanied by more or less condensation of moisture, or clouds, or even by none at all. In general the laws of the motion and changes of the wind in re-establishing an equilibrium must be the same, whether the action takes place in a greater or less degree."

Again,⁵ "The storms over the temperate zone consist of this conflict, caused by the prevailing current being replaced by the opposing one. As often as the region of low pressure, or the line where these currents meet on the surface, passes over any point, a storm is produced at that point, and a change of wind, a change

³Page 252. ⁴Page 43. ⁵Page 70.

of temperature, a change in the pressure of the air, in short, a change in the weather takes place—*i. e.*, a change or disturbance in the regular circulation of the atmosphere.”

There are a number of other points that we would gladly call attention to if space permitted, for it is a work which strikes out from the beaten paths and develops many new ideas in meteorology. If the generalizations of the author will stand the test of a careful examination and comparison with the multitude of facts and observations already on record, meteorology has certainly made a long stride forward, and one which will do much to entitle her to the name of a science. Whatever be the final judgment, however, upon the theories here advanced, it is certain that Prof. Blasius has made a most valuable contribution to our knowledge of the movements of the atmosphere, and has done much to improve our acquaintance with that mythical personage, the “clerk of the weather.”

QUEEN MARY. A Drama. By Alfred Tennyson (author's edition from advance sheets). 12mo., pp. 284. Price \$1.50. Boston: James R. Osgood & Co. 1875.

Continued effort in one direction tends to give the mind a fixed shape, so that when a statesman turns into a novelist, or a soldier into statesman, which things have been, the children of the wise are on the alert for proofs of unfitness. When it was announced that Alfred Tennyson was preparing a drama, the intensest interest and curiosity was felt as to the manner of his flight. The single excursion that Dickens made from his peculiar domain in the Tale of Two Cities was not half so bold, nor nearly so late in life. Since 1830 the English reading public have seen the beautiful crystal of the laureate's mind forming under their eyes, and they were not unnaturally astonished to see their symmetrical poet sally forth from his study with facets cut and polished and never seen before.

Had we not all concluded that the author of *Mariana*, *The Lady of Shalott*, *Lady Clara Vere de Vere*, *The May Queen*, *St. Simeon Stylites*, *Locksley Hall*, *St. Agnes*, *Break, Break, Break*, *In Memoriam*, and *Enoch Arden*, was a singer of the beautiful, and especially of that class of beauty which is sorrowful? Perhaps we did suspect that he possessed another vein, viz: a sense of humor and a power of delineating peculiarities in manner and speech, which, though indulged very rarely, is seen among his earlier productions in “*The Goose*,” and in “*The Northern Farmer*,” among his later ones. But in the index of his poems, “*The Charge of the Light Brigade*” is the only one, and in this respect it is a literary curiosity of a high order, whose inspiration is full of action, strength and fire. And now to the idyls, to the

songs of love and of sorrow, to the visions and to the tales of refined chivalry, is added the crowning wonder of Bloody Mary in drama. We instinctively feel that if Tennyson must dramatize at all, the other Mary, or Lady Jane Grey and Sir Thomas More, would be characters better suited to his temper.

How will such a man treat a queen whose royal selfishness was divided between an insane desire for her husband's love and her soul's salvation? How will he portray to us a heartless, scheming king? What voices will he utter to us from the burnings for the glory of God? As to these points we take up the volume in doubt, but with assurance as to others. We know that the author has the accuracy and discrimination of a scholar, and that he will present his characters and their times with intelligence and art. Perhaps we may regret that he did not take his new departure as a historian rather than as a dramatist. Then we know him to be a poet of absolute good taste, and we shall find the phrases, expression, incident and upholstery of the play orderly and elegant. And all this we do find; but it is a drama, and careful searching shows hardly a stroke of dramatic energy from one end to the other. Tennyson does not know how rough, aroused men and mighty spirits feel, for he cannot tell us how they speak. The passions of Mary and her relentless mate, the glory of burning Cranmer, the cold sovereign nature of Elizabeth, are a key above or different from his lyre. The heights of the play, viz: the Queen's appeal to the Lord Mayor and Aldermen of London for aid against Wyatt; the debate in the Council as to the expediency of reviving the statutes against heresy; the soliloquy of Cranmer in prison, and his address at the stake, all lack grandeur and even spirit. These are no themes for the artist or the metaphysician, and as we read the cold, proper speeches, we long to leap into some angrier current that would move and keep us warm.

Tennyson's facility in delicate analysis of feeling, and his less familiar power of portraying odd and vulgar things, are the strongest points of the book. Mary's despair at her husband's neglect moves us to sympathy. Philip's stiff and ill-affected politeness to her is masterly. Courtenay's butterfly temper, the Lord Mayor's hesitating but blustering display in the Wyatt insurrection, and Cranmer's conscientious but wavering mind when tempted to fly, are presented with his usual nicety. By far the most vivid scenes of the play are of street, servant and peasant life, and if there is anything at all like Shakespeare in the book it is to be found in them. We recall among the most spirited, the conversations of the citizens in Act I., Scene 1; of Wyatt and his rambling old servant in Act II., Scene 2; that between Wyatt and Captain Brett in the 3d scene of the same act; the dispute between Gardiner and the man who could not lift his hat on account of the crowd, in the 1st scene of the 3d act; a really spirited encounter between Elizabeth and her rough old

keeper, Bedingfield, in the 5th scene of the same act; and finally, an inimitable dialogue in the 3d scene of the 4th act between two old peasant wives about the burning of heretics. And throughout the play we are refreshed by the brave English honesty of Sir Ralph Bagenhall. Whatever Queen Mary contains of the author's old familiar voice is good, whatever is new—*new*.

THE NORTH AMERICAN REVIEW. NO. CXLVIII. July, 1875. Pp. 240. Boston: Jas. R. Osgood & Co.; Philadelphia: W. B. Zieber.

This opening number of the hundred and twenty-first volume is occupied with the discussion of very large topics. The most definite, and to us the most interesting of the papers, is the first, on "Some Late Efforts at Constitutional Reform," by Mr. Henry Reed, of the Philadelphia Bar. It is a very clear analysis of the reformatory provisions of the new constitutions of Illinois, Pennsylvania, Ohio, Michigan and New York. The result reached is mainly this: Many of the new provisions have no proper place in a constitution at all, and nearly all of them will be ineffectual in their actual workings, or will accomplish the result intended by the sacrifice of things still more valuable. This last is especially urged—as it was by the late Chief Justice Read—against the plan of numbering the ballots of Pennsylvania voters. The whole discussion, which is admirably clear and forcible, impresses us with a belief in which its author does not share—that the States should be no more than municipalities.

The paper on "Geological and Geographical Surveys," shows how much Uncle Sam has yet to do before he has finished taking stock, and points out mistakes made in the methods of what has been done. Chauncey Wright reviews Todhunter's *Conflict of Studies* with much discrimination, pointing out the imperfect psychological analysis that underlies some of the great mathematician's reasonings, while fully confirming others. The exposure of the doings of the Tweed Ring is continued in another chapter of "An Episode of Municipal Government," by Charles F. Wingate, who is either very inaccurate in his statements, or else Mr. Samuel J. Tilden is not the immaculate statesman he passes for.

The art of the Renaissance period is discussed by Sarah B. Wister, *apropos* of the works of Pater, Rio and Burckhardt. The English author gets the least, and the German the most praise. Of the shorter notices, the most interesting are of Wundt's *Physiologische Psychologie* and Green's *Short History of the English People*, of which latter the *Review* says: "It is difficult to speak of this book in any other terms than those of unqualified praise."

A SHORT HISTORY OF THE ENGLISH PEOPLE. By [Rev.] J. R. Green, M. A., Examiner in the School of Modern History, Oxford. With Maps and Tables. Pp. 823, royal 8vo. New York: Harper & Brothers.

This book is one that stands at the head of its own class. There is no other such "short history" of any nation as Mr. Green has given us of his own nation. It is a masterpiece of condensation, and yet in every page there is as much spirit, life and movement as is to be found in the pages of the fullest and most elaborate works. We doubt whether any American author could tell our far briefer history—about one-sixth as long in point of time—with the same fullness in the same space. There is not a prominent personage in English history whose life is not told us with an individuality and a *vraisemblance* which lingers in the memory; there is hardly a marked passage in the story, which is not so narrated as to give the reader a real grasp of the facts, and make him feel that real men, and not lay-figures, were the actors in it. Every true hero has full justice done to his heroism, while his weaknesses, if important to the story, are not ignored. The spirit of the book is in all things the very opposite of that of Hume; the author rather seeks for good motives, than desires to resolve those that appear good into petty and selfish impulses. As we read, we realize the truth of Holmes's compliment to the mother country—

One-half her soil hath walked the rest
In poets, heroes, martyrs, sages.

The tone and drift of Mr. Green's judgments are always nobly ethical; they are always inspired by an English love of order and freedom. He is English of the English, and yet no Philistine. He has just ideas of what constitutes real national welfare, and is not misled by the appearance. He judges severely of men and characters unworthy to control the national destinies, and has no patience with false and wicked men. But he is not a mere *ensor merum*; he is genial, pleasant and hopeful, while thoroughly and utterly in earnest.

Our author's name first came before the public in the strong praise which Mr. Freeman bestowed upon labors as yet unpublished, save in a few magazine and newspaper articles. He is of course of Mr. Freeman's school, but more able than his master to do justice to those who are not. Like Freeman, he regards the invasion of the Angles and Saxons as the beginning of a completely new order of things, and seeks the previous history of the nation in the corner of Holstein from which those peoples came. But he repeatedly refers his readers to Mr. Pearson's admirable *Early and Middle Ages of England*, a book to which Mr. Freeman would never have referred anybody, if we may judge from the unjust severity with which he has reviewed that and Mr.

Pearson's *Historic Maps*. In both cases we think Mr. Freeman has been misled into unjust judgment by his antipathy for Mr. Pearson's main *thesis*, that the history of the island from the time of the Roman conquest is a continuous history.

There are, of course, places in Mr. Green's work which we cannot regard as quite satisfactory. In his notices of the economic side of the subject, he is very deficient, especially in regard to the Navigation Laws. So again as to simple events—the escapade that lost Elizabeth's Essex his life is narrated only incidentally. But that there are so few vacant places to be filled up in a second edition, shows that Mr. Green has spent years of labor on his book, and that not an hour has been misspent.

BOOKS RECEIVED.

A Question of Honor: a Novel. By Christian Reid. 12mo., pp. 501. Price, \$1.75. New York: D. Appleton & Co., 1875.

On the Heights: a Novel. By Berthold Auerbach. Translated by Simon Adler Stern. Library Edition. 12mo., cloth, pp. 624. Price \$2.00. New York: Henry Holt & Co., 1875.

Open! Sesame! By Florence Marryatt. A Woman's Ransom. By Frederick William Robinson. Maud or Nina. By J. G. Whyte-Melville. Woman's Love; or, Like and Unlike. By J. F. Smith. Counterparts, or the Cross of Love. By the author of Rumor. Uniform series, 75 cents each. Boston: Estes & Lauriat.

Familiar Quotations: being an attempt to trace to their sources, Passages and Phrases in common use. By John Bartlett. Seventh edition. Pp. 864. Boston: Little, Brown & Co., 1875. [Claxton, Remsen & Haffelfinger.]

Lady Duff Gordon's last letters from Egypt, with a memoir by her daughter, Mrs. Ross. Crn. 8vo., pp. xl. 346. Price \$2.00. New York: Macmillan & Co., 1875. [J. B. Lippincott & Co.]

Report of the Commissioner of Agriculture for 1874. Annual Report of the Secretary of the Treasury on the State of Finances for 1874. Government Printing Press. Washington, D. C.

THE
PENN MONTHLY.

OCTOBER, 1875.

THE MONTH.

PARLIAMENT has been prorogued until the 29th of October. Little has been accomplished since it assembled, the most important of its acts, the Merchants' Shipping Bill, being, after all, nothing but a temporary measure to serve the purpose until a better one can be adopted next year. A session so barren of results is the natural outcome of the influence of Mr. Disraeli's easy-going policy, if policy it can be called. The let-everything-alone principle of the present government is strangely in contrast with the nervous, busy course of Mr. Gladstone's. Under the latter the tendency to reform all things was developed to an almost unhealthy degree,—but Mr. Disraeli has floated into the opposite extreme. The re-action, after so much nervous force, has not been disagreeable, but few can carry out the policy of inaction for any length of time so well as the late Lord Palmerston, who had a special gift for doing nothing and keeping every one in a good humor meanwhile. It has been remarked generally, in the English journals, that the Prime Minister has lost his prestige. Whether he has really forgotten his cunning or his natural force abated may perhaps be doubted, but ill-health has told upon him seriously, and his sixty-nine years weigh more heavily on him than they generally do on the well-trained English statesman. But Mr. Disraeli is the reverse of English in his character and temperament. In that fact has lain most of his strength, and out of it may come at last his weakness.

THE end of the Carlist struggle seems at hand. After a well-contested siege, Seo de Urgel has been forced to surrender at discretion, and its commander, Lizgaraga, together with its Bishop, made prisoners of war. The Bishop of Seo de Urgel is a famous personage. For several hundred years the possessor of that See has enjoyed almost independent power. He has reigned like a king over his little state and the minds and persons of its inhabitants. The present Bishop is said to be a man of some talent for intrigue and of great ambition. Under his hands the feudal powers of his office have been used to the full, and always vigorously in aid of Don Carlos. The mountain fastnesses with which his territory abounds have served the Carlists as places of refuge, while his money and means have been liberally expended in aid of the Pretender. His capital is described as apparently impregnable, and so he seems himself to have thought it, for he took refuge there, with all his wealth, on the first signal of the approach of the Alfonsist army. When it became evident that the place would fall, negotiations were begun by the Carlists to secure the Bishop's safe departure; but Jovellar, who commanded the investing forces, evidently appreciated the worth of the Bishop to the Carlist cause, and refused such conditions peremptorily. At last accounts, the unfortunate Bishop was in the hands of his enemies; and the cable informs us that the Government had determined to let the law take its course in his case without interference from any quarter. The loss of this stronghold and its chief has been followed by other disasters to the adherents of Don Carlos, and Dorregaray, his leading general, is reported in full retreat. The lovers of order, however little they may confide in the priest-ridden government of Alfonso, will not fail to rejoice at any event which shall terminate this bloody and unnatural struggle.

THERE is some danger that, after all, the well laid plans of the French Constitution-makers, who have intended that the new Senate shall contain the most eminent statesmen of the country, will come to nought. Victor Hugo and Adolphe Thiers, the representatives of two very different ideas and men of dissimilar political views, have both declined to become Senators, and it is feared that others, almost as eminent, will follow their example.

The power of the Senate as devised must necessarily depend on its being made up of men for whose character and opinions the country entertains the greatest respect, and if, by an unfortunate chance, it should degenerate into an asylum for the superannuated politicians, or a refuge for the incapable, it will be worse than a fifth wheel to a coach, and retard rather than aid the progress towards security of the French Republic. Under the American system the Senate always must contain a few leading minds and remain the goal of most politicians' ambition. When the French Senate leans less towards the American mode than towards its English House of Lords, it will fall far short of accomplishing the object for which it was created. A House of Lords without the peculiar prestige which belongs to the English body, and which comes chiefly from the English fondness for exclusive privileges, and is kept alive by the accession to it of Commoners of intellect and character, would not be a whit better than the Napoleonic Senate, which became very soon a mere collection of courtiers and favorites, without either character, intellect or independence.

TIMELY incursions on their frontiers have just provided the desired pretext for fresh annexations to those two absorbers of their neighbors' territory, Russia and Egypt. The English journals contain a despatch which announces, unofficially however, the intention of Russia to annex Khokand, and the Khedive of Egypt has despatched gunboats and troops to repel and punish the invading Abyssinians on his southern frontier. Little by little the boundaries of Russia are extending eastward, until they threaten to touch the western ones of British India, and the absorption by that empire of most of the weaker powers of Asia is a mere question of time. English feeling is far less sensitive on the subject than it was ten years ago, and there is now little prospect of trouble. In Africa the enterprising Khedive has it all his own way, and he is steadily pushing his southern limits up the Nile. So vigorous and able a ruler as he has shown himself to be cannot fail to improve the regions over which he extends his power, and it is fortunate that no European jealousies stand in his civilizing way.

THE latest accounts from Herzegovina are unfavorable to the insurgents. The Turks have regained control of Bosnia, checked the uprising of the Montenegrins, forced the Prince of Servia to pledge the neutrality of his subjects, and marched a strong force into the heart of Herzegovina itself, and that which promised three weeks ago to be the lighting of a fire which would soon break into fragments the Moslem empire in Europe, may now be almost quenched. Although we heard of many atrocities committed by the insurgents, it is hard not to sympathize with them in the struggle. The Christian population in Herzegovina, Bosnia, Servia and Montenegro largely outnumbers the Mahomedans. It is a liberty-loving and warlike race, which long ago, if left to itself, might have achieved its independence. But the fears and jealousies of the Christian powers have always benefited the Turks and withheld countenance from the Slaves, and to them, rather than to the vigor or power of the Sultan, has been due the fact that for so many generations the many have been held in subjection by the few. It is not easy to exaggerate the hatred of the two races for each other. The remembrance of innumerable injuries has combined with mutual distrust to keep alive the enmity which comes of religious differences, and for more than a hundred years these outlying provinces of Turkey have been as uneasy and turbulent as a South American Republic. In this last case the uprising had a small beginning, but the country was in such an inflammable condition that it spread like flames in tow, and in a fortnight the whole province of Herzegovina was ablaze. The excitement spread beyond the boundaries, which are but arbitrary, arousing the patriotic fervor of the Slaves in the neighboring provinces, and for some time the situation appeared very grave. The European powers in general seem to have regarded it with apprehension. England, always jealous of Russia and with an unnatural if easily explained fondness for the Turk, could not but regard the disruption of the Turkish Empire in Europe with anxiety. Austria could ill afford to allow the establishment on her southern frontier of a Slavic empire, the attractions of which might draw from her in a critical moment her Croatian and Dalmatian subjects. Prussia would see with dissatisfaction so fair an opening as the success of this insurrection would offer for the am-

bitious designs of Russia upon Constantinople and the Bosphorus; and the latter, however much she might desire the destruction of the Turkish power, is not in a situation to bring it about in the face and in spite of united Europe. And so the Sick Man will no doubt hold on a little longer.

It is much to be regretted that this is the case. The rule of the Turks over the Christians of the Levant has long been synonymous with cruelty, rapacity and intolerance. The worst forms of oppression, and injuries daily added to insults, have been the experience of the Christians for generations. A slavery of the most degrading kind has been their portion from father to son, and every attempt to secure their freedom has been crushed in bloodshed. And so for more than a century the Slaves, a handsome, brave, intelligent people, with a singular talent for poetry and music, and a passion for liberty, have stood bound at the very portals of Christian Europe, when the rattling of their chains could be distinctly heard within. Nor can it be doubted that the formation of a Servian Kingdom would be a great gain, not only for the Slaves, but also for the cause of civilization. The Turkish power has outlived its *raison d'etre*. It is an anachronism and, to use a newly coined word, an "anatopism," too. It is a sluggish, inert barrier in the way of progress—a thorny obstacle in the path of civilization. Its power cannot be upheld by any plea of justice or right, and it has long forfeited its claim to exist. On the other hand a Christian power, built up of Servia, Bosnia, Herzegovina, Croatia, Montenegro, and the Slavic inhabitants of Albania, Roumelia and Bulgaria, would give an opportunity for the improvement of those countries, and for the development, intellectual and moral, of an interesting and highly-organized people, whose faith is Christian, whose spirit free, and all of whose yearnings are in the direction of better things.

THE recent feat of Captain Webb in swimming from Dover to Calais deserves more than passing notice. Unlike Boyton, who was clothed in an india-rubber dress, the gallant captain left his clothes behind him and plunged in, accoutred only in the "garb of nature." Twenty-one hours and forty minutes afterwards he

landed at Calais, fatigued but undaunted, amid the cheers of Frenchmen innumerable, having accomplished one of the most extraordinary feats of endurance of which this century has been the witness. The achievement of Leander becomes no more remarkable than a five minutes' floundering in a bath-tub, beside this performance of Captain Webb. Doubtless swimming across the channel will now become the rage. Englishmen have climbed nearly all the mountains in Europe hitherto deemed inaccessible, and now, perhaps, their attention will be directed to this other branch of muscular sports. Indeed, there is no saying what we are coming to. The end of this century, already so prolific of extraordinary discoveries, promises to be worse than the beginning. One inventor has discovered the long-sought-for machine by which the balloon can be guided and controlled. A trip to Europe and back in fifty hours he considers a mere nothing, provided you can get a good start, the first mile being the only difficulty in this as in some other things. Another has invented the power of telegraphing without a wire—by means of the earth and air. The next will, perhaps, teach us how to communicate instantaneously with absent friends in China, without even an electric battery; and, certainly, if all that is claimed for the Keely Motor should prove true, and unlimited power be obtained by a simple mixture of pure water and unaltered air, the happy tourist of the future may be able to drink a glass of Schuylkill water and take a long breath, and be whisked off to Kamtschatka in a jiffy!

THE death of Commodore Goodenough reminds one of that of Captain Cook. An English captain, surrounded by his crew, lands from his ship in Carlisle Bay, in the Australian waters, to hold a parley with the natives. After a friendly talk he starts towards his boat, when suddenly the savages fire upon the group of Europeans, and the leader dies, pierced through the side by a poisoned arrow. The ignorant savages of Carlisle Bay will doubtless have reason, ere long, to repent of their barbarity, if they have not already done so under the civilizing influences of red-hot shot and bursting shells; meantime there is opened a fine field for the missionary talents of the power which thrashed King Coffee and killed King Theodore.

THE action of both whites and blacks in Georgia seems to have been commendable. A little intemperance of word or action by either party might have blown the spark of "General" Morris's insurrection into a conflagration, but, fortunately, this was restrained. The whites, particularly, behaved with pluck and self-command. The arrests were promptly and quietly made. Corday Harris's trial was conducted with fairness, decorum and ability, and the people generally have shown excellent sense in acquiescing in the verdict which acquitted him. Mississippi has been less fortunate, because less well behaved, and the troubles in Hinds county have alarmed the Governor. The new state of things in the Attorney General's office has destroyed for the present his hope of interference by the President, and the disturbance will have to subside naturally. Here the outbreak was sudden and unpremeditated, being caused by a white scoundrel, who desired, first, to drink his whiskey contrary to the law; secondly, break the bottle over the sheriff's head, and lastly, fire his revolver playfully among his negro neighbors, by way of displaying the superiority of the white man. Fortunately he met a timely death. In Georgia, however, there was a well-organized conspiracy, which meant bloodshed and rapine. It would be interesting to know just what lady suffragists and civilizers of the Susan B. Anthony type and school seriously think of the proposal by the conspirators to kill all white men and "ugly" white women, and spare only such of the latter as were "pretty." Education by the ballot has progressed rather slowly in Georgia since 1865.

MR. WILLIAM WELSH's letters are interesting, and no doubt widely read. It may be regretted that he does not shorten and condense them, for he has just now the public ear and always deservedly the public respect, and men are interested in his controversy with Delano. But the letters as they stand contain so much valuable information and material, and bear evidence on the surface of such sincerity and truthfulness, that they must have great weight in determining the public mind against the Secretary of the Interior and his friends. That philanthropist continues quiet, having, doubtless, found that his first telegrams and letters were not a literary success, (his use of the indefinite article having

proved particularly unfortunate,) and that deeds rather than words were needed to convince a stubborn generation of the sincerity of his efforts to Christianize and civilize the savage.

THE confidence of the world in the stability and character of the civilization of the Pacific coast has not been increased by the events which attended and followed the failure of the Bank of California and the death of Ralston. The bank under Mr. Ralston's management went wildly into speculation, and came at last, as was inevitable, to ruin. At the moment of the discovery of its insolvency, Ralston killed himself or mysteriously died. Upon this, the directors of the bank which had been ruined by him, while authorizing the statement that he died largely indebted to it, after misusing its enormous capital, attend his funeral as pall-bearers with all the evidences of respect and sorrow; and the same despatch that contains the particulars of the dead man's reckless, if not dishonorable career, bring us accounts of a mass meeting attended by tens of thousands, to hear his eulogy and do his memory honor. The fact is that in the busy, pushing life of that new country, a premium is placed upon those qualities which do most to develop its resources and increase its material wealth, just as perhaps in older lands men prize chiefly those which guard and protect and preserve. They certainly seem, in this instance, to lose sight of the distinction between honesty and dishonesty, disgrace and honor, in the temporary blindness which has come of striving too readily at the one object of all, success.

The suspension of the bank was as necessary and inevitable a result of a course of reckless speculation as the darkness is of the setting sun, and would have come sooner or later, in any country and at any time. If experience has still any value as a teacher, this part of the lesson will do good; but it may well be feared whether the whole story in all its bearings may not prove to be, in the highest degree, demoralizing.

AGE is always venerable, but when in a man of great ability, deep learning, profound wisdom and exalted character, it touches the threshold of a second century without palsying the hand, dimming the eye, or clouding the intellect, it inspires something

more than veneration. Death seemed but recently to have spared Horace Binney as an example to his younger countrymen at a time when they had most need of the lessons which his life could teach. From the rare promise of his youth he passed through the fulfillment of his remarkable manhood into his extraordinary old age, with a firm and almost majestic tread. In all the relations of life, he was a model—as a lawyer, as a citizen, as a man; in the family, in society, in the forum, in the State. He was, perhaps, the best type of lawyer which this country has produced; one formed on the old English plan,—learned, skillful, eloquent, high-toned,—and his like, as a professional man, (owing to the varied influences which make up the American of to-day,) we are not apt to look upon again. Born during the Revolution, he had witnessed the whole course of his country's history as an independent power. He had seen it grow from a little confederacy struggling for existence into vigorous manhood, through internal as well as external trials. And he never lost for a moment his interest in the events of to-day. Unlike so many aged men, the Past never obscured the Present to his eyes, and he bore so lightly the unwonted burden of his ninety-five years, that no one who looked into his face and listened to him as he spoke could believe it possible that he was so old.

The present generations hardly knew him personally, for he withdrew from active life more than thirty years ago; but his influence seemed to increase with the years that touched him so gently, and few men in full vigor and activity have wielded in this community the power which Mr. Binney exercised to the last moment of his life. Yet, after all, his native city, characteristically enough, did not wholly appreciate him. In her own peculiar fashion she was proud of him, and yet it was a selfish pride. Had Horace Binney lived in Boston, and been half the man he was, the best part of his life would no doubt have been spent in the service of his country, and Philadelphia would have been among the first to honor him. But as he was one of her own children, she suffered him, with the exception of one term in Congress, to remain all his life a private citizen. The future critic of our institutions, glancing through the list of obscure and sometimes ignoble names, which Pennsylvania has sought to honor, will wonder why men like Sergeant and Meredith and Binney

were never made Governors, or Chief Justices, or Senators of the United States, and will see in that fact, perhaps, one explanation of the smallness of her influence on the country, in comparison with that of South Carolina, or Virginia, or New England. "By their fruits ye shall know them;" by the worth and character of their men are cities and commonwealths rightly to be judged. More than one Bostonian has become famous because of his surroundings; Horace Binney was great in spite of his. But now that he is dead Philadelphia, perhaps, will appreciate what manner of man he was, and realize, when too late, that she will probably never again possess or lose so great a citizen.

ANOTHER convention of the Democratic party has contributed its share to the political history of Pennsylvania, and added even more than usual to the arguments which forbid the independent citizen, who cares little for the partisan organizations of to-day, to lend that party his vote or confidence. There has not been for a long time a better chance for the Democrats to regain control of Pennsylvania than they had this fall. Hartranft and Rawle represent nothing but the influence against which most men rebelled last year, when the Republican party was defeated. There is but little in their characters, and nothing in those of their associates, to inspire hope or confidence, and in the canvass they are bearing several heavy burdens. Last year the Democrats carried the State with inferior candidates and without an active or spirited campaign. The nomination of their present candidates on an honest platform would have won for them the enthusiastic support of all their own adherents, and the warm sympathy of the majority of Liberals and independent voters. But their adoption of the Ohio platform must necessarily defeat their most respected leaders, drive from them the independent vote, without which they can hardly hope to beat the Republicans, and condemn to inaction, or active sympathy with their opponents, every man who believes in hard money and an honest currency. Philadelphia will be the battle-ground, for there the Republican majority is largest, and Philadelphia was represented in the convention by hard-money men. The Eastern half of the State is the most doubtful, and the Eastern counties sent to the convention hard-money men. Yet it cannot be doubted that in some quarters this cry of "more

money" will be very popular, and the gravity of the situation must strike every one when the Democrats of Pennsylvania abandon the traditions of the party for the sake of a supposed expediency, and Pennsylvania joins Ohio in the cry for "more paper." We once said "principles, not men;" we have been lately crying "men, not platforms;" but the excellent character of Judge Pershing cannot blind us to the danger of his success. Indeed, if it be true as asserted, that he is "personally in favor of hard money, but will yield his views to the necessities of party policy," he is not the man for whose sake, or in whose behalf, we can afford to run any risk. The election of Allen in October may mean that of Pershing in November; the success of the advocates of greenbacks this Fall will give them the Democratic Convention next year. If Thurman and Hendricks can bend before the storm, (as they have done this time) Tilden and the Eastern men may prove also to be politicians rather than statesmen, and we shall then have a Democratic candidate for the Presidency on a paper money platform. The danger of such a situation cannot be exaggerated; but it will, at least, divide the parties on an issue which means something and is of vital importance. There will then be no straggling from the ranks, and no man will dare, for his own sake, to refuse to fight on one side or the other. If, however, there is such stuff in the hard-money Democrats as there seems to be in Mr. Sowden, of Lehigh, who, after fighting manfully for his views, said in the faces of the yelling delegates, "If you give up principle and the traditions of the party for the sake of a temporary success, God forbid that you should succeed!" and such devotion to their views as the speeches of paper money Republicans give us leave to hope, we may see both parties split where they are weakest, and new ones, full of vigor and conviction, formed out of the fragments, to fight to a final settlement this question of the currency.

The correspondent of the *N. Y. Tribune* puts very well the dilemma presented to the Pennsylvania voter this fall who must choose "between Hartranft and Rawle, with the corrupt Cameron-Mackey ring behind them, but with a specie platform under their feet, and Pershing and Piolet, two sterling reformers, standing on the worst rag-money platform ever made by any convention, in any State."

THE ENGLISH BIBLE AND ITS REVISION.

THE study of literary history is one that very profoundly impresses thoughtful men with the uncertainty of human efforts. Every prolific period presents its special students with a great galaxy of various orders of talent, stars of many degrees of magnitude, but of these only a very few attain that recognition from posterity, that permanence of fame, which is supposed to be the object of all literary ambition. Perhaps, indeed, these secondary, tertiary and quaternary lights have not lived in vain, as by a certain sort of literary absorption, not paralleled in the stellar world, they contribute to the light and the brilliancy of the few bright, particular stars, whose rays reach posterity. A Shakespeare gathers up into himself the intellectual wealth and greatness of an era, and is its greatest plagiarist by right of being its greatest genius. A Milton embodies the quintessence of the moral and the intellectual activity of forty of the most stirring and stormy years of English history. A Homer reflects, as in the shield of his own Achilles, the manifold and varied life of his whole people,—of all the Hellenic tribes and all the Hellenic singers, it may be, that gathered along the shores of the sunny Ægean. The old dream of gathering the essence of a library into a single volume, is no barren fancy; it is the very work of those whom we call men of genius, and who reflect the intellectual and literary life of their generation. The permanent literature of the world, that which is produced by minds of the first order, embraces the wealth of all. As old Hesiod reminded his avaricious brother—

πλεον ἤμισον πάντος—

“the half is more than the whole.”

Hence the just pre-eminence of the elect few of the world's literature, and the perpetual failure of the attempts to win popular attention for men of the second order. Very much of the finest talent of every generation need not expect the reward of everlasting remembrance; even when their works are not the echoes of first-class literature, they will earn no higher reward than this—that they have themselves awakened echoes in the breast of genius, and furnished material or suggestions for a work of the first class. Many dreamers dreamt before

Bunyan; sectarian jealousy would fain rob him of his glory of originality, by proving his obligations to his predecessors; but their labors only prove him a writer of the first order, the genius whose rise extinguished the light of men of talent.

English literature, the greatest after that of Greece, is, like Greek literature, especially distinguished by the possession of great and pre-eminent books. While it has had periods of tame and flat mediocrity, such as that between Chaucer and the Reformation, it has rarely lacked names that greatly and worthily represented the intellectual life of the people. And it was not without justice that Wordsworth proudly contrasted his own country in this respect with her rival France, where he found

No single volume paramount, no code,
No master spirit, no determined road;
But equally a want of books and men!

One of these "volumes paramount" of English literature, because of its peculiar origin and history and its relation to popular beliefs, is in our days about to be brought once more under the file of critical revision. In the English Bible, the people possess a work which is not of native origin, and is yet the most native of English classics. This collection of Hebrew and Greek histories, poems and letters, made centuries ago in the midst of an oriental people, has shown a wonderful capacity for acclimatization in other lands and other tongues. Through its pages speaks a Spirit that is not that of the age in which these books were written, nor that of the people among whom they had their origin, but the Spirit of all times and all lands. And therefore it finds a fitting utterance in all tongues and a hearing among all people. Goethe's dream of a cosmopolitan literature, which should supersede the national literatures of the earth, finds in this book such a fulfillment as is not to be found in his own works, nor even in the greatest ancient or modern classics. Homer and Shakespeare, Calderon and Dante, are limited in their range and breadth of interest, when compared with the four Gospels, or David's Psalms. Here we have the purest literary form united with a literary substance of universal and perpetual interest; here is a book that truly mirrors life itself, in its unity of profundity with simplicity. We would not be understood as wishing to deny or ignore those local, temporal or personal elements, which belong

to this collection of books, nor even to thrust these into the background. The old notion that the Bible was like *Euclid's Elements* or a series of logarithmic tables,—a collection of abstract and absolute truths, in which the personality of the writer was utterly sunk and lost sight of—is happily a thing of the past. It could not hold its own in the face of an intelligent and reverent study of the book itself. A theory of inspiration that represented these writers as the mere “penmen” of divine truths,—the recorders of divine decrees and oracles,—is contradicted on its every page. Especially the wonderful display that Jeremiah gives us of the inner history of a prophet, of the divine education by which he was led to deeper and purer insight, must forever set aside all such mechanical theories. Inspiration was and is education; was the gradual leading by which the inspired man was brought to see the new truth for himself, before he was sent out to speak it to his brethren. And when he did speak, it was in accordance with his own mental constitution and forms of thought. His utterance bears the impress of his own character and mind. His individuality, so far from being crushed and annihilated by the influences that prompted him to speak, was raised to a still higher potency and brought into clearer and stronger light. It was the heathen, especially the Greek conception of inspiration (see Plato's *Io*), which regarded the divine influence as setting aside, or crushing into nothingness, the individuality of the inspired man.

And as of the personal, so of the local and temporal elements in the Bible. They are not made little of in the book itself; they are made very much of. This book is the literature of a land, a nation. That land and its people are kept before the reader from beginning to end. It could not be otherwise, unless the very method of the book were to be utterly given up. For here is no record of abstract propositions and dry decrees, but a grand series of object lessons, teaching us the laws that underlie the lives of men and of nations, of families and of churches. Hence the great gulf that separates this book from all others that claim to reveal the divine will. It is not necessary—we think it is not right—to assume that there is no God-given wisdom in the Qurân, and that God taught Mohammed nothing. But the Qurân—apart from all specific objections to its contents—is not a book of his

tories and examples, of characters and individualities. It is the collection of the decrees that Allah uttered through the Prophet; it teaches, not like the Bible, by examples and instances, but dogmatically. In literary wealth, in broad human interest, in everything that makes a book a "volume paramount," the Bible is incomparably superior. And when the comparison is extended to the books regarded as sacred by other peoples,—to the Vedas and Shasters, to the Eddas, to the Chinese classics, to the Zendavesta,—the contrast is still more glaring. However much of "the light that enlighteneth every man that cometh into the world" may shine through any or all of these, they all fall far below the broad and genial humanity of the Bible. Leaving out of sight the comparison of their spirituality, the Bible takes the higher rank for reasons apprehensible to all.

But while these personal, local and temporal elements of the book are very well worth our study, it is certainly a fault of the best modern criticism that it has fastened attention so exclusively upon these. The motto of the critics has been "Let us judge this book as we would any other book," and a most excellent motto it is. But the first step to the fair judgment of any book is to find what there is in it that accounts for the peculiar part it has played in the world's history, and for the hold that it takes upon men's minds. It is not merely to show wherein it is like other books, but also what is peculiar to itself. Shakespeare cannot be fairly estimated, when we think of him simply as one of the series of Elizabethan dramatists and compare him in this and that detail with Marlowe or Ford or Johnson. It is when we also ask ourselves why he has reached and moved those who care nothing for these his associates, and why he has had a world-wide welcome, that we come to know something of the man's special greatness. So we might feel and say at the close of book after book by modern critics: "If this be all, why all this ado? If the analysis of these books here given, which resolves them into a combination of local, temporal and personal elements, be the true one, then what a prodigious set of fools the world is filled with! Why have these books in this collection called the Bible been an inspiring and quickening moral force in the world? What imparts to them their world-historic significance? What has enabled them to break through the natural and linguistic lines that

seemed to separate them and their custodians from the rest of mankind? Why does this English, this German Bible rank above Shakespeare as an English and Goethe as a German classic?"

The only solution of these questions that seems to us adequate is that which we have suggested above. There is not only a spirit peculiar to each people, and a spirit peculiar to each age of the world's history, but there is also a Spirit above and beyond these, their Master and their Lord—the living centre of the spiritual world and the source of its light. And while in this collection of books the spirit of a distant nation, of distant and dead writers, of distant and dead ages, have in some degree mirrored themselves, as modern criticism labors to assure us—yet at the same time, here as nowhere else, the Eternal Spirit speaks to men, and finds an answer in men's hearts. Here His utterances have found a worthy form. Here His dealings with men are most clearly mirrored and disclosed. Here the laws of life are best set forth to men.

"But does not the theory that the Bible is inspired by the Eternal Spirit forbid us to find any of His utterances elsewhere? Must not this be an exclusive claim?" The Bible itself says not; it discloses to us a "Father of lights," "from whom cometh every good and every perfect gift." It speaks of a "light that enlightens every man that comes into the world." It confesses the truth that is found in the words of pagan poets and philosophers. It describes Balaams, and Melchizedeks, and Jobs, and Corneliuses, as men of God. And it vindicates its own peculiar and central place in the world's literature, its place as *the* book, far less by asserted claims than by the facts of its own history as a book. It has won men's honor by actually being "a light to their feet and a lamp to their path," rather than by claims to be divine or by proofs of its divinity. It has been content to be judged, as it says men will be judged, by its fruits. Men have judged that it gave light, as they judged of the sun; they got light from it. And to every doubter and denier it has answered as Philip answered Nathanael—"Come and see!"

But it is only to the English and the German-speaking nations of Europe that the Bible has become all that it can become as the people's book. For obvious reasons the Latin nations of Europe have no national translation of the Bible, and while the Italian version of Diodati and some of those that have been made in French

(Calvin and Beza, Ostervald, Martin and Le Maistre de Saci,) possess certain merits, they have never attained general recognition. Calvin's great services in the development of French style are only now attaining recognition; but his mind was too narrowly scholastic to permit of his rendering this service to France. De Saci's is the best known translation by a Roman Catholic, but Joubert justly says that the great Jansenist *a rasé, poudré, frisé la Bible*. So little has the book become, in any version, a national work, that we have seen a sensational French novelist transfer to his pages long passages from the Gospels, relying upon their novelty to attract and secure the attention of his readers.

In the Scandinavian countries the Lutheran translations were rather unfortunate. The first Danish and Swedish versions were mere slavish copies of Luther's German version, and nothing worthy to take their place has ever been offered in their stead. The Swedish Church has been engaged in the preparation of a national version for over a century, but we believe the work is not yet completed, and what has been done lacks unity of execution, and is otherwise far from satisfactory. The Dutch Calvinists have done better; laying aside the old versions of the Reformation, the States General, at the recommendation of the Synod of Dort, provided for the preparation of a version which has all the qualities dear to the heart of a Hollander. It is a correct, precise and faithful rendering, without either fire or eloquence—a book to which critics appeal for the interpretation and the theologians for proof-texts, but without the swing and the boldness of a translation of genius. It is just the version for the land of dykes and canals, the land without mountains or forests.

In Germany translations were made and printed long before the Reformation, especially at Augsburg and Nurnberg. They seem to have been translated from the Latin Vulgate by the compositor himself as he stood at the case, and they possess no literary merits to atone for their low rank as versions of a version. Luther's translation, begun in the Wartburg, in 1521, and repeatedly revised down to his death, was the work of a great genius exerting himself to the utmost of his powers. To put the Bible into the hands of the people in a form intelligible to them, was the desire of his heart. He spared no pains to get at the true sense of its words, lingering for days over an obscure verse, call-

ing in his learned associates in the university as a consulting body, and even pursuing original investigations in various branches of Bible antiquities. But all this care would have been of slight profit had not Luther been a great master of the speech of the common people, and therefore able to make the Prophets and Apostles *Deutsch reden*, not as divines and scholars spoke, but as the people did. "To learn how German is spoken, one must ask the mother in the house, the children on the street, the common man in the market, and take heed to their mouths, how they speak, and interpret thus; so will they understand it then, and mark that German is spoke to them." The book became Luther's most precious gift to the German people, the standard of their language, which gave to the Thuringian dialect its place as the German of literature. His theological opponents did him the honor of "conveying" it almost in its entirety, and reprinting it as a Catholic version. Even Audin finds in this version "evidences of genius, and expressions as natural, beautiful, and melodious as in the original languages. It sometimes renders the primitive phrase with touching simplicity; at others, it invests itself with sublimity and magnificence. It is simple in telling the story of the patriarchs, familiar in the Gospels, and colloquial in the Epistles of Paul and Peter. The imagery of the original is rendered with undeviating fidelity. Add to this the odor of antiquity exhaled by Luther's dialect—as pleasing as the characteristic tints and tones of the old German masters. We must not be astonished, then, at the enthusiasm felt by all Saxony. Both Catholic and Protestant regarded it as an honor to their ancient speech." Down to our own times it has remained the standard Bible of Protestant Germany, unaltered, unamended and unrivalled. The Reformed translation, published at Zürich, never had more than a local circulation.

But new translations have appeared in the mean time in great numbers. Some, like those of Michaelis, Bengel, De Wette and Bunsen, were the work of critical scholars and possess considerable value for scholars. Only the last named of this group makes any pretension to popularity, but it has never attained it. Others originated with the Rationalists, like the fragmentary version called the Wertheimer Bible, and the frivolous translation by Bahrdr. Others still were made by the mystics, such as Horbius, Reitze and

the Berleburg Bible. But a revision of the Lutheran version for general use, though often urged, was first fairly undertaken by the Frankfort senator and lay theologian, John Fred. von Meyer, whose revision appeared in 1819, and was several times re-revised. Although urged upon the German Churches by the eminent commentator Rudolph Stier, this revision failed to command attention; and at this present time a commission of the most eminent of German Biblical scholars is preparing a revision of the Lutheran version which, without destroying its literary and popular character, is to remove the worst of its very serious defects. In comparison with the English version, Luther's (like Diodati's,) affects an idiomatic freedom that is sometimes startling. For instance, where our version has it "Out of the abundance of the heart the mouth speaketh," Luther emphatically repudiates any such literalness, and translates—"Whose heart is full, his mouth runs over."

Our English version of the Bible was not the work of one man nor of one generation of men. From Tyndall down to King James' translation, a long succession of hands were employed in making the Bible speak English, and the final version that like Aaron's rod swallowed up all the rest, bears traces of the influence of them all. Even Luther, through Tyndale, bore a part in the great work, and before the authorized version passed its final revision it was compared with all the leading translations, English and foreign, ancient and modern. Being the work of different committees, it is not uniform in literary merit, nor always consistent with itself in matters of detail. But its substantial merits have won for it an exclusive place in the regard of all English-speaking Protestants. When it was first made, England was divided between adherents of the Bishops' and of the Genevan versions, the latter being the Puritans and the Church of Scotland. The leading Puritans, notably Cartwright, were included in the commission with a view to composing the strife; but for a time the Genevan version held its own, and is indeed the only one that the Church of Scotland ever sanctioned. But without any specific action, and simply by force of its own merits, the authorized version won its way even among this disaffected party, and is now used as a matter of course by the Kirk and all the Presbyterian bodies on both sides of the Atlantic.

Proposals for its revision were published during the very century in which it was made, and have poured in a continual stream to our own times. The most curious perhaps were those that filled a folio volume published in 1660, by Dr. John Gell, a divine of the mystical or cabalistical school. A very large quarto volume of extracts from these proposals translated into German, appeared at Berleburg in 1723, making a sort of preliminary to the Berleburg Bible (1726-42). But in spite of this prolonged agitation, no popular demand for a new version can be said to have as yet arisen; on the contrary, it has always been easy to raise an outcry against any one who has the audacity to attempt it. Thus the American Bible Society, some twenty years ago, employed Rev. Dr. Robinson—the author of *Biblical Researches*—to remove from its standard editions the more evident printer's blunders of punctuation, &c., and to assimilate some of the proper names of the New Testament (Noe, Esaias, Jeremy, &c.,) to the Old Testament form. Not a single new rendering of any verse was proposed, but such a hue and cry was raised against the proceeding, that the revised editions were withdrawn from circulation and are now rarely to be met with. As might be expected, the reverend gentleman who distinguished himself by originating this senseless clamor, has avowed his opposition to the revision now in hand. He stands almost alone in the ranks of those who have any pretensions to scholarship. For this revision is the work of scholars from first to last,—of men whose special acquaintance with the subject have made them dissatisfied with a popular translation that does not adequately represent our present knowledge of the Bible. A quarter of a millennium has expired since our authorized version came from the press, and with almost every year new knowledge of the text and of its meaning has accumulated; older manuscripts have been brought out of their hiding-places; the labors of Mill, Wetstein, Bengel, Griesbach, Lachmann, Tischendorf, and Tregelles, have restored the New Testament text to a degree of primitive purity, that far eclipses the old *textus receptus* of Erasmus and Stephanus, which was nearly all that our translators had before them. The study of comparative philology has cleared up the sense of obscure words, especially in the Old Testament. To-day the Bible of the scholar and the Bible of the common people are two different books; there was no such

difference in 1611, and there should be none now. To restore the relation of the people's hand-book to the scientific knowledge of the learned, is the purpose of the revision.

But our revisers are proceeding with a reverent regard for the authorized version, which is quite sufficient to allay the apprehensions of the timid. Their purpose is to preserve the literary identity of the book, and to exclude from it all new, all merely modern words and phrases. Where an alteration is to be made, the new rendering will be expressed in words already found in the Bible, and nothing that touches the integrity of the book as a classic of the Elizabethan era—for such it is—will be admitted. Indeed, they are more likely to sin on the side of deficiency than of excess—to leave small faults uncorrected than to correct what were best left alone. Perhaps the greatest surprise to most people will be the strong resemblance of the revised version to the unrevised. It will read like just the same old book. Yet there will be some very decided alterations. Much of the Gospels will be relieved of a certain wordiness that grew out of their use as reading lessons in the primitive Church, and they will doubtless be set free from several unauthentic glosses, which some copyist first wrote on the margin, and then his successors transferred it to the text. The periodical descent of the angel to trouble the water of the Pool of Bethesda will doubtless be excised, as also the text comparing Jonah's three days and three nights in the whale's belly to those of the Son of Man in the grave. The story of the woman taken in adultery, with its doubtful moral that the magistrate must be sinless to be just, will disappear from John's Gospel if the translators are faithful to their text; and the much discussed verse about the "three that bear record in heaven" will be at last sent packing. Some orthodox proof-texts will change their tone, but the loss will be replaced by others. In the last book of the New Testament especially, the multitude of corrupt readings of the old *textus receptus* will be passed by, and the revised version will give us the sense of what John actually wrote.¹

¹It is said that Erasmus has actually no MS. whatever of the closing part of the Apocalypse, and that he actually translated the Latin Vulgate into Greek, and that this re-translation is what passes for John's words in the *textus receptus*.

As to the questions that must arise between different texts and critical editions of the New Testament, it is perhaps to be regretted that the revision occurs at a time when the name and influence of Tischendorf are so greatly in the ascendant, and when his judgments on points of criticism carries with it a weight that it does not deserve. Tischendorf's services in this department, in the discovery and collation of MSS., are too great to need any person's eulogy. But the thousands of variations from each other that characterize his successive editions, show how wavering and unstable his judgment was; and in his eighth and final revision the influence of his great "find," the *codex Sinaiticus*, has upset what little judgment he possesses. Even supposing, what is by no means, certain, that that MS. is older than any other, it by no means possesses a preponderant authority on that account.

Karl Lachmann, a philologist, not a theologian, has applied the well established principles of textual criticism to the determination of the New Testament text, and the results reached by him and his associate, Phil. Buttmann, have never been superseded. Even the discovery of the *Sinaiticus*, while it does cast light on some places, cannot permanently and materially discredit the text of Lachmann. And especially the text of Tischendorf, based as it is chiefly on the authority of favorite MSS., will not—we are convinced—permanently hold its own against Lachmann's.

The number and the order of the books both of the Old and the New Testament will of course remain as at present in the revised version. We think it would be far better to adopt the order of the Jewish Canon in the Old Testament—referred to and sanctioned by Christ—and to arrange the books of the New Testament according to the three great Apostolic schools of Christian teaching. In the Old Testament we should then have the Law, the Prophets and the Hagiographa (or deuterocanonical books). In the New we should have the Petrine (Mark, Matthew, James, 1 and 2 Peter, and Jude), the Pauline (Luke, Acts, Paul's Epistles, and that to the Hebrews) and the Johannine groups of writings. The Pauline Epistles, again, were better arranged in their probable chronological order, than according to the relative importance of the places and people that they were written to, as at present; and the Apostle's name should certainly be omitted from the superscrip-

tion of the Epistle to the Hebrews. As to the exclusion of any books now received into the canon, it is well that no such responsibility rests on our revisers. Even supposing that the objections brought by criticism against some of the canonical books are valid, and that the adoption into the canon of the book of Daniel—let us say—and of the Pastoral Epistles, was a mistake, still their presence in the canon is a source of no mischief; if they have no light, they will give none, but neither will they detract from the light given by other books. And to reverse the argument, the fact that each and all of these books has been authenticated by the Christian consciousness of the Church in all the past ages, is an argument that the probabilities of criticism can hardly set aside. The Bible comes to each of us on the authority of the Church—not indeed of the decision of this or that body of clergy assembled in Synod or Council, nor of any body of doctors or *schola theologorum*—but of the great host of suffering and believing men, who fought the good fight and found here light and armor. Nor are we called upon to swallow the book whole, or to confess a divinity in any part of it that has not yet been revealed to our own consciences. Parts of it may lie utterly in the shadow for us—do so lie for the best and wisest of those who have studied it. Our business is merely with those that give us light, and to do our work by the light they give. The man who does God's will according to the light he has, is the man who gets more light upon things still obscure to him. To do the duty next our hand, to live up to all the light we have, is our plain calling in this as in all other connections. Nor is it our concern as to what theories of canon or inspiration are held by other men; an undue attention to such things, an undue hostility to opinions that we cannot see to be true, is very likely to do us great injury, by prejudicing us against the things about which we differ. To seek to know the truth that gives vitality to opinions which are but half true is a wiser mental attitude.

But to return to our revisers. As is well known, the churches of both England and America are united in the work of revision, but heretofore the American committees have been regarded by their English associates as a mere advisory body, who are to have no voice in the final decision of any question, and no share in the ownership of the work when finished. By dint of earnest expos-

tulation, the American committees have more recently secured a fairer recognition from their English associates, and have made arrangements which they believe will enable them to secure copyright of the work on this side of the Atlantic. It is even expected that the American editions will differ from the English, in conformity with our national standards of orthography and punctuation. Whether the copyright laws of the United States are strict enough to prevent a reprint of a work copyrighted in England remains to be seen. We fear that any unscrupulous publisher will be at liberty to reproduce the English edition without reference to American rights, and that the variations introduced into the American editions will rather hurt than help the case.

When the revision is at last ready for publication, it will probably be disposed of to a number of American publishers. The Bible Society will hardly take it up until it has secured the sanction of its own constituents in general. Even very recently that great publishing corporation was discussing the propriety of again canvassing the country, to see that every family that reads English is supplied with a copy of the unrevised version. What decision was reached we do not know, but such plans do not promise a very speedy adoption of the revised version. Perhaps its adoption will come first from the ecclesiastical bodies; if the Episcopal General Convention, the Presbyterian General Assembly, the Lutheran General Council and Synod, the two Reformed General Synods, the Methodist General Conference, and the National Conference of the Congregational churches, will unite in the adoption of the revised version, it will come into general use as a matter of course. But in nearly all of these there will be warm discussion and difference of opinion; the conservative and the timid will urge the old objections as to the unsettling of men's faith, and the promotion of skepticism; single versions of texts will be fastened on as specially objectionable to the principles or feelings of this or that church, and it will be found that not every one is pleased with the change. But the solid, good sense of American Protestantism will sooner or later prevail, and the dread of a new source of sectarian division among us—the dread that has kept a majority of Baptists out of the Bible Union—will be felt with overwhelming force.

Of course the new version will be spoken of as a finality; its

more timid friends will say to revising, "Thus far shalt thou come but no farther." But by the time another quarter of a millennium has passed away, the theologians of Great Britain and of Greater Britain will be ready for a second revision of the greatest of English classics, the book that has preserved the purity and dignity of the English tongue.

EDUCATIONAL REFORMS AND REFORMERS.—III.

DR. JOHN M. KEAGY'S "EDUCATION THROUGH THE SENSES."

THOSE who have read the inimitable sketches of John Brown, M. D., of Edinburgh, called "Spare Hours," may remember one with the above title. The educational system of Dr. John M. Keagy comes so near the thoughts thrown out by the well-known writer of "Rab and his Friends," upon the subject of mental development in childhood, that the title selected is especially appropriate.

As far as known to the writer of this essay, all that can be gathered from printed records respecting the theory of Dr. Keagy is in the Introduction to a "*Primer*," copyright dated 1826, printed for the author in Harrisburg, Pa., in 1827, and a similar introduction of his views extended to suit more advanced pupils, prefixed to an English work, *Oswald's Etymology*, reprinted in Philadelphia in 1848, which, from the date, must have been published after his death.

In the Preface to the *Primer*, Dr. Keagy says: "This little book, now presented to the public, is designed to be the first of a series of elementary school books, which the author intends to publish should the present effort meet with suitable patronage. The work was begun under a conviction that something of the kind is needed in our primary schools to create a *habit of thinking and understanding what is read*. It is called 'The Pestalozzian Primer,' after Pestalozzi, a celebrated reformer in education, still living in Switzerland, whose mode of teaching pursues the natural order of our intellectual operations, beginning by sensible objects, and conducting his course by oral explanations. A similar

plan being adopted in this elementary work was the reason why the epithet 'Pestalozzian' was assumed."

It is to be regretted that Dr. Keagy, from want of suitable encouragement, or from his engagements as a teacher, did not continue the contemplated series, by following up the laws of mental expansion and growth from infancy to adolescence, so as to be able to give the facts and observations he had gathered in his study of children. From what is left recorded it is evident he had learned that mind is not made by teachers, but with the body itself, is part of the living organism of God's creation, bearing the impress of His laws, which cannot be violated without serious, and it may be fatal injury.

In following the course pursued by Dr. Keagy, we find a series of exercises intended to promote a sound and healthful development of the mind itself, that it may be prepared for the future reception of knowledge, and to do a present good service in leading the child to gather facts for himself by using his senses, thus gaining, says Dr. Brown, "a sort of objective knowledge," which every child can acquire if it be given the opportunity.

In presenting the views of Dr. Keagy, we shall use chiefly his own words, with occasional condensation in the illustrations. Taking a glimpse of what is properly included in the general term Education, he first defines this "as the development and invigoration of all the useful susceptibilities or powers of a human being, whether bodily or mental. These may be divided into the physiological functions, the moral feelings, and the intellectual powers. The education of each of these portions of the human constitution must be attended to, if we wish to prepare a child to be happy and useful."

Our business at present, however, will be to attend to the nature of the *intellectual faculties*, and the mode of bringing them into action for the benefit of the possessor.

When we examine the nature of our thoughts, we find that they consist of a recurrence to our minds of what we have seen, heard, tasted, smelled, or felt, and mental combinations and judgments concerning these things. Of the truth of this position every one must be convinced who has paid only a slight attention to the operations of his own mind. An idea, then, is nothing more than a mental perception of an absent object, its qualities, or actions;

or it is the *mental* repetition of our sensations. If our ideas are derived from our sensations, the primary business of Intellectual Education should be the cultivation and strengthening of the senses, and the perceptive power through them. This would lay a solid foundation for subsequent acquirements.

By the perceptive power, we mean the faculty by which the mind is conscious of the various sensations communicated through the organs of sense. By the faculty of attention we give direction to our perceptive power, and are capable of holding an object before our mind, so as to examine it minutely. The faculty of attention becomes, from this circumstance, the medium of furnishing our memory, judgment and reasoning power with all the materials upon which they operate. If we are capable of fixing our attention vigorously, our memory and judgment will necessarily possess similar vigor. If, on the contrary, we possess but little power to direct and fix our attention, our memory and judgment will exhibit the same debility. To acquire a habit, then, of fixing our attention steadily and undividedly on any object of thought, so as to trace out all its attributes and relations, is a matter of the greatest moment in a good system of intellectual discipline. It is imperfect as it is unsteady, and thus inattention becomes one of the greatest obstacles to our progress in knowledge.

The cultivation of our senses by a suitable course of exercises invigorates attention. The senses that should be particularly exercised are those of sight and touch, as these are the pivot upon which our sensations revolve. The sense of seeing, to all who enjoy this great blessing, bears off all others, in its importance. From what has been said we may venture the position, that we think in pictures and scenes. That this is true, is evident from the terms used in all languages to express our intellectual operations. * * In our every-day experience in life we may also see the astonishing tenaciousness of our memory whenever we associate visible scenes, or symbols and places, with ideas of any kind.

The method of teaching the deaf and dumb is also a proof of the effect of visual sensation and location on the memory. In teaching these persons, every thing must be pictorial, scenic and pantomimic; and this is the cause why they learn so fast and remember so well.

Following out these views in a course of practical education,

we ought to make all nature a tablet of Mnemonic Symbols with which we might naturally associate their appropriate ideas. These scenic ideas thus located would form a world of experimental facts to supply us with funds in our generalization of principles. This truth should therefore be made a leading principle in the education of the intellectual faculties. So far as it has been applied, it has displayed the most valuable results. Every teacher is acquainted with the value of counters in teaching arithmetic, of maps in teaching geography, and of charts on the plan of LeSage and Priestley in giving an accurate knowledge of history and biography. Historical paintings also become the nuclei for concentrating and fixing thousands of ideas, which without their aid would be as evanescent as a wasting cloud. In natural philosophy and chemistry also, the experiments, apparatus and associations of the lecture room form the scenery in which our scientific ideas permanently reside. Something similar may be said of all the natural sciences, and the view may be even extended to ethics, and the most abstruse of what are called the abstract sciences.

From all this we may draw an important inference, viz: that precepts, axioms or abstract principles in any science, are of little or no use to the inexperienced. An abstract principle can only be of service to him who has been an experimenter, and has been in the habit of drawing inferences from what he has observed.

That this is true in morals, we have additional evidence in the difference in the conduct of our Saviour toward His disciples, and toward the mass of the uninitiated people. To his experienced disciples He gave precepts; but to the people He spoke in parables, or scenic representations of moral principles—that thus having the moral actions before their minds, they might deduce their proper practical conclusions from them.

Hence we see, that both nature and revelation furnish us with proofs of the correctness of the method of teaching by induction from facts and scenes; the only true and speedy method of acquiring knowledge, and which when it comes into general use, will change the face of the intellectual world.

There are two intellectual operations which should be continually kept in exercise in a course of practical education. These

are generalization and analysis. By generalization we mean the classification of objects by some resemblance of their parts or attributes. By analysis is meant the examination of an individual object for the purpose of separating it into its different parts and noticing its various properties and actions. Correct and minute analysis becomes the source of accurate generalization, and generalization is the origin of all the sciences. These constitute, in the hands of a skillful teacher, a most important engine for exercising the mind and increasing the store of knowledge. Analysis cultivates attention and renders the memory tenacious. Generalization has a similar effect on our powers of recollection, by connecting to one point or principle a variety of useful facts existing in different subjects.

As language is the medium through which knowledge is communicated, it may be proper to examine *the office of words*, with reference to the theory we have given of the thinking process.

Words stand either for whole objects or for parts; for whole scenes or for some portion or action in a scene. Thus the word *body* represents a whole, consisting of many parts, as the *head*, *trunk*, *extremities*; and the *head* includes in it the ideas represented by face, forehead, eyes, ears, nose, mouth, &c. But since language would be imperfect if we had only words standing for the names of objects, it was found necessary to be more minute, and hence we have terms expressing every species of action and quality.

Words, then, being used not only as signs for whole objects and their parts, but likewise for their qualities, actions and uses, they become, as Condillac observes, our most useful instruments of analysis. They are, from the same circumstance, equally the instruments of generalization. The minute appropriation of terms concentrates attention by limiting the range of mental vision, and thus insures accuracy of observation.

When we look at words in this light as the means by which we communicate our thoughts to one another, we may compare them then to the painter's pencil. If the hearer or reader can readily realize or embody the scenery presented by words, he is said to understand the speaker or author, and so *vice versa*.

If these observations are true, it will lead us to see the evil consequences of learning to look at our printed words or visible lan-

guage without thinking. This is unfortunately a common practice of learning words, and produces the prevailing habit of reading without understanding.

The definitions in spelling books and dictionaries by no means answer the intentions of their authors, because they consist too much in general terms; and we believe that thoughts, in order to be realized and remembered, must be connected with particulars, whether these be objects or scenes. They can communicate very little knowledge to the pupil unless his teacher accompanies his definition lessons by a course of practical phrases on every word, or induces the pupil to do it, as far as he can. It is the only plan of enabling a child to comprehend the true meaning of words. Here words begin to assume their true office, and become in reality the instrument by which the mind carries on its thinking process. We would not go so far as some metaphysicians, as to say we cannot think without words; but we feel authorized to say, that they are the memorandums of our ideas, and are absolutely necessary to us for retaining the greater portion of our thoughts.

Our author proceeds to specify the *practical divisions of language for elementary school books.*

To acquire language with correctness and facility, we may adopt three very useful practical divisions, viz: Ideology, Etymology, and Phraseology.

The term ideology we use with relation to the connections of ideas with words. As all our ideas of quality, action and relation reside in or are intimately associated with objects and scenes; so it must follow that the words expressing objects must be the principal words in all languages. These words we shall take the liberty of calling ideological radicals or roots, and they should be the subjects of the analytical lessons we have spoken of. The terms that represent qualities, actions, and relations, will of course become the subjects of generalization.

Etymology is that division which shows us the origin of words from one another, so as to form large families retaining the orthographical features of the primitive word, as well as the idea. It is properly only a branch of ideology, but so valuable as to merit separate attention.

By phraseology, we mean an analytical exhibition in words of some scene. Here it may be repeated, that we think in whole

phrases as well as in single words, just as we think in whole scenes as well as individual pictures and parts of a scene. All elementary school books should be composed with an eye to this division of language.

We will now mark out what we believe to be a judicious mode of conducting *the development of the intellectual faculties* from infancy to the stage in which the pupil is capable of comprehending metaphysical terms.

Children should, at first, be led to think and to express their thoughts orally. Oral language is of every-day use, and by its means the infant mind is trained. It is peculiarly adapted to early education; and children, until they are six years of age, should have no other teaching. This ought to be conducted by parents at home.

An infant, before it can speak or understand what is said to it, seems incapable of fixing its attention. This is ever veering from object to object, without any sign of observation or recognition. But as soon it acquires the power of directing its attention, and is able to use words, we are surprised by the acquirements it makes during the first year after it begins to talk, and its acquired power of expressing its ideas. In this oral course, directions are given as specimens of the simple questions to be asked, to direct its attention to familiar objects—their parts, uses, etc.,—teaching it to notice their differences or resemblances. These questions can be varied indefinitely, requiring care not to go beyond the capacity of the child or the bounds of its experience. Children can be thus taught to observe and examine, by exercising their senses on the subjects of their lessons, which ought to consist of real objects, and pictures with oral histories respecting them. In this mode children can be thoroughly prepared for learning successfully at school.

After a child has been thus exercised in a thinking and oral course, he may be taught reading. And here he should not be taught his letters at first; but whole words should be presented to his eyes, after the same manner that some teachers of the deaf and dumb commence the reading business with their pupils. This is the surest way of making them learn to read understandingly. The most familiar words should be given, such as hat, head, eye, mouth, book, candle, etc. It is better not to give words of more

than two syllables. These lessons should be read without paying any attention to the letters, but special regard to their meaning. When whole words can be read with facility, then, and not till then, let the alphabet and syllable spelling be taught. If this mode were adopted, both teacher and scholar would experience a pleasure in vain to be looked for on the other plan.

To obviate the inconveniences arising from the child's seeing so much at once, as is usual in common school books, we have invented an apparatus, which may be used with singular advantage in the early stages of education. It consists of a wooden frame, with a sliding frame divided into any number of divisions to receive the letter blocks, having large letters or words pasted on the end. In making reading lessons with these blocks, we take the whole words, then the alphabetic and syllabic exercises afterwards. Every word must be explained, or the labor is useless; and it is not enough that individual words should be understood, but the whole phrase made on the frame must be realized as a scene by the pupil. A very simple and effectual way of leading him to do this, is to ask him how he would draw on his slate a picture of what he has read. He will instantly catch the clue, and give you the full sense of the sentence. This will, more than anything else, create a love for reading. When the child finds he can form mental scenes from printed words, he will try to know the meaning of every word, and this fixed as a habit will secure his future education.

The art of writing ought to accompany or soon follow the ability to read. The true meaning and right application of a word can be most readily realized if the pupil be taught to use the word in a written phrase. This soon becomes a pleasant exercise.

The facility of committing our thoughts to paper is a matter of importance, and ought to be the paramount object of school education. The pen has a still greater influence in regulating the mental powers than speech, by the slowness and order which it obliges us to pursue in combining our ideas. Our conclusions will be the result of a longer attention to the objects under consideration, and, consequently, will be more likely to be true.

It should also be made an early part of a scholastic course. If it is not commenced before the age of twelve or fifteen, it will be

much more difficult to acquire the art of readily penning our thoughts afterward. The reason is obvious: no two actions can be performed at one time, unless they have been rendered easy by habit.

The habit of thinking and speaking at once begins in the first efforts of a child to lisp its words. But the habit of thinking and writing at the same time is acquired by few, so as to be performed with facility or freedom from restraint. The only reason we can assign for this deficiency is that children are not early taught to put their ideas on paper, so as to establish as perfectly the association of the process of thinking and writing, as that of thinking and talking; and in after life, they are scarcely ever able to form the habit. Thus the practice of composition assumes an importance as a school exercise, second to none in the whole course of intellectual education.

The Pestalozzian Primer was brought into notice soon after its publication by an article in the *North American Review*, and endorsed by the editor of the *American Annals of Education* in 1839.

One edition only being published, the book soon passed out of print, and never became extensively known. Simple and attractive as I found its lessons were to my children, yet its plans and progressive arrangements might be studied with benefit by teachers. Were its instructions fully carried out, the child thus taught would form mental habits invaluable in his subsequent education in the higher departments of knowledge.

AN ELIZABETHAN COURTSHIP.

THE Amoretti or Love-Sonnets of Spenser are eighty-eight in number, and addressed to the Elizabeth who was probably afterwards the wife of that union so brief, and of which the ending was so mournful. He married in 1595, his Irish estate was sacked by rebels in 1598, and in 1599, in poverty, though probably not in destitution, he died at London. With a carelessness which to us appears strange and culpable, Spenser's own genera-

tion kept no account of those details of his life, which in modern times are the essence of biography. If Grevil in his life of Sidney does not give half a dozen points of Sidney's actual doings, how much harder is it to find even a trace of contemporary gossip concerning a man immeasurably Sidney's superior in genius, but of whom the men of his own day preserved scarcely a record beyond a handful of poetical addresses, painfully ingenious in their laudation, and empty in all other respects. From the sonnets we gather what few facts survive to tell of his outward life, and in these same sonnets we have what makes the outward life of comparatively the slightest interest, a picture to wit of his inner life, a true limning of the deep feelings of a noble man of perhaps the noblest of ages. The sonnets are addressed to his love; and while designed to portray her, have given a very presentment of himself—of that self which elsewhere in his writings, even in the Faery Queen, is not to be more than guessed at. He speaks of their being for her only, and one believes him when he says

"Leaves, lines and rymes seek her to please alone"

"Whom if ye please, I care for other none."

We do not read five sonnets before we find that his passion is counseled by honor and admiration, and is not the spoiled child of desire. The first thing he speaks of, when he is scarcely yet hoping, is her pride, and in the final surrender to him as lord of her love, this does not vanish.

"The thing which I doo most in her admire"

* * * *

"For in those lofty lookes is close implide"

"Scorn of base things and sdeigne of foul dishonor."

* * * *

"Was never in this world ought worthy tride"

"Without some spark of such self-pleasing pride."

Trusting as he does, he is patient too—not however without ebullitions of petulance, as we shall see. He says

"So hard it is to kindle new desire

"In gentle brest that shall endure forever."

* * * * *

"Then thinke not long in taking litle paine"

"To knit the knot that ever shall remaine,"

having just pointed the old moral of lightly come, lightly go,

and illustrated the converse by the simile of the "durefull oake," which slow to kindle burns long and surely.

It being easier to quote than to describe, let me give without asterisks the charming tribute to her in the 8th sonnet.

- "Through your bright beams doth not the blinded guest"
 "Shoot out his darts to base affections wound:"
 "But angels come to lead fraile minds to rest"
 "In chast desires on heavenly beauty bound."
 "You frame my thoughts and fashion me within:"
 "You stop my toung and teach my hart to speake:"
 "You calme the storme that passion did begin.
 "Strong through your cause, but by your vertue weake."

Alas for the attempts to discipline unruly man, this admirable control breaks lamentably down. In Sonnet IX. we have him complaining of the inequality of love, in that he should so suffer while she "lordeth in licentious blisse of her free-will": she is become the "Tyranesse" and her eyes, the source of those bright beams whose pacificatory power he had just been apostrophising, are become guilty of "huge massacres": in Sonnet XI. she is a cruel warrior, and in Sonnet XII. the eyes are also the close covert of a wicked ambush. He returns again however to his adoration, and we are told of that proud port which so clearly distinguishes her, to his seeming, from commoner women, and he notes that while she carries her head high, yet that she lets her eyelids droop.

- "Myld humblesse mixt with awful majestie,"
 "For looking on the earth whence she was borne,"
 "Her mind remembereth her mortalitie,"
 "Whatso is fayrest shall to earth returne."
 "But that same lofty countenance seems to scorne"
 "Base thing and thinke how she to heaven may clime."

In the 14th sonnet we are turned over to siege, engines and battery; though he takes pride in thinking that the strong castle he is attacking would disdain to give early signs of surrender. That old soldier, the Sire de Montluc, had said, "*La femme qui ècuote, comme la ville qui parlemente, est prête de se rendre,*" and Spenser would have the trumpets from the battlements deliver fierce and continuous defiance, long before they sound for a parley. Then he occupies himself in counting the riches of her person, her eyes like sapphires, her lips like rubies, etc., and wonders in the fancifully conceited phrase of his day why the tradefull mer-

chant with so much toil should ransack the Indias, when in her, alone such treasures are to be found; the closing couplet to this sonnet XV. is:

"But that which fairest is but few behold,"

"Her mind adorned with vertues manifold."

Next he tells us how in her glancing sight—he is thinking of motes in a sunbeam, though he does not make the comparison—he saw legions of Loves flying about darting their little arrows, yet that she "with a twinkle of her eye" turned aside one of these shafts aimed at his very heart.

Then he betakes himself to description again, that natural solace for the waiting lover, protesting that no portrait of her face could ever be made, for how paint

"The sweet eye-glances that like arrows glide,"

"The charming smiles that rob sence from the hart,"

"The lovely pleasance and the lofty pride."

But of what avail is it? she only mocks him, she does not believe in his sufferings, she laughs when he groans, she suggests that with him sighing is an art, and that tears are but water. Then warning her that the cuckoo has come and already sounded thrice, and that all must turn to Love ere the cuckoo end, he invokes mighty Love to proclaim her rebel if she disobey. The fulmination has no apparent effect however, for in sonnet XX. she is worse than a lyon or even lyoness, the latter seeming to represent, being feminine, the climax of ferocity.

But this is all nonsense, and she must have convinced him of it, for we find him again subjugated, being now reproved, now encouraged.

"Thus doth she traine," he says, "and teach me with her lookes,"

"Such art of eyes I never read in bookes."

In books, indeed! Now it is Lent, and he builds within his mind a temple for his sweet saint, "in which her glorious image placed is," on which his thoughts do night and day attend. Then in another mood he falls back upon paganism and likens her treatment of his suit to Penelope and her web; and next she is even a Pandora. He says that he had better die at once, "but,"—note how much virtue there may be in your 'but'—*but* if in her

hardened breast she hides a close intent at last to show him grace, why then in the meanwhile he welcomes the worst.

Sonnet XXVI. is a pretty posy, showing that though the Rose, the Junipeer, the Eglantine, the Firbloomme, the Cypresse, the Nut, the Broome-flowre and the Moly are all of them sweet, yet that each has its drawback, a briar, a sharp bough, rough branches, an ill root, or what not, so his waiting is the sour without which the sweetness of success would be cheap.

He reminds her, proud as she is, that she is but earthly after all, and that the only immortality possible for her here is that which he shall give her.

“ But what this verse that never shall expire,” (pride, we see, is contagious)—

“ Shall to you purchase with her thankles pain.”

“ Faire be no longer proud of that shall perish”

“ But that which shall you make immortall cherish.”

Those expert in wooing as a practical science would probably find in Sonnet XXVIII. the first really hopeful sign for the poor distracted lover: she wears in her hair a laurel-leaf, his badge: he with classical aptness bids her beware of Daphne's fate. Then he gives her a bay, and having evidently presumed too much on that laurel-leaf incident, she turns on him by telling him that the bay is given by the vanquished to their conquerors, and by the conquerors to the poets that these may sing the glory of the victory: he replies that if she will let him he will be her poet and fill the world with the praise of her achievement.

He goes into natural philosophy for arguments and metaphors: she is like ice, he fire; only, paradoxically, she never melts and his flame is not quenched: she is like iron, and he is like fire, only he burns to ashes before she begins to glow.

He adduces in his favor even the doctrine of final causes, and asks why nature, which gives every dangerous beast a dreadful countenance to warn mankind, did not in her case hold out some such sign, instead of the sweet allurements of her lovely hue.

How too, racked as he is, can he do his duty “ To that most sacred Empresse his dear dred” by finishing her Queen of Faery; and to a friend he seems to appeal to confirm this plea.

He is again a ship sailing by a species of dead reckoning, but not in despair.

"Yet hope I well that when this storme is past"
 "My Helice,¹ the lode-star of my lyfe"
 "Will shine again and look on me at last"
 "With lovely light to cleare my cloudy grieffe."

Next comes a wail demanding when all this is to end,
 "Is there no meanes" he cries, "for me to purchase peace"
 "Or make agreement with her thrilling eyes?"

But there is no justification for his accusing her, as he does next, of attiring her golden tresses under a net of gold with sly guile to catch men's hearts, or for his saying that for a free man to covet such fetters, golden though they be, would be mere fondness—that is to say, folly.

Having compared himself to Narcissus, because his eager eyes were doing him to death, not in self-contemplation, but in pining after her; and having distinguished himself from Arion, who had, when thrown into the sea, won by his lay a dolphin to his service while she is careless of *his* plaint, he indites two exquisite sonnets to her smile, which made a melting pleasance run through every part, and by reason of which he says, with much simplicity,

"More sweet than nectar or ambrosiall meat"
 "Seemed every bit which thenceforth I did eat,"

and who shall say that his passion and himself were not both the better for this improvement in his appetite? He says further of her smile:

"Lykest it seemeth in my simple wit"
 "Unto the fayre sunshine in somer's day"
 "That when a dreadful storme away is flit"
 "Through the broad world doth spread his goodly ray."

But the smile fades away, for we have him again bitterly complaining, not knowing whether to speak or keep silent, and trying by a tuneless harp in vain to calm his warring passions. Then he turns to her and says, with a natural sentiment that is truest poetry,

"Leave, lady, in your glass of cristall clene"
 "Your goodly self forevermore to vew"
 "And in myself my inward self I meane"
 "Most lively lyke behold your semblant trew."

¹ Helice (Ainsworth Dict. ad verbum) is from *ἑλιεω*, and signifies Charles's Wain, the constellation of the Great Bear: the one that is nearest the north or attracting star.

Alack! there comes a relapse into abuse; he speaks of her guileful looks and tells how she delights in the destruction of masculine peace of mind. But he has clearly gone too far, for the next thing that we hear of is that she has put his lines into the fire: and if these were Sonnets XXXVII. and XLVII., they deserved their fate. To openly accuse one's love of guile and of deliberately snaring men for her own glory, brings the guilty party—as all jurists agree—within the utmost pains and penalties of Cupid's statute de heretico comburendo in that case made and provided.

He falls ill, but the leech whom he sends for does him little good and he adjures his "lyfe's leach" with one salve both heart and body to heal.

Now he goes back to an old source of comfort, and minds him that fairest images are of hardest marble made that they may long endure, so her heart once made to take a shape will ever keep it.

Though after all in this there is no substantial consolation, and he begins calling names for the third time at least. She was, as we have seen, a lyon and a lyonesse; now returning to zoology she is a panther, and in one sonnet—to think of it, all in only fourteen lines—she is a tygre, and the carnivora being exhausted, a hurricane and a deadly rock beside.

Sensible of his folly, he has a fine sonnet (LV.) describing her as in a theatre idly sitting, while he goes through all his parts so absurdly inconsistent, now acting a comedy, now plunged in tragedy.

In Sonnet LVI. he analyzes her and finds conclusive reasons for holding that she is not composed of the four simple elements of the happy chemistry of that day, earth, water, air or fire, but of a new element, the sky.

"For to the heaven her haughty looks aspire"

"And eke her love is pure immortall hye."

In Sonnet LVII. he acknowledges himself beaten, and throws down his arms unconditionally, asking for mercy only.

He writes of her self-assurance, advising her in one poem not to lean too much upon herself: in the next, telling her what a glorious quality is this self-assurance—in the modern tongue, self-reliance or self-respect. In another sonnet he falls prostrate in adoration of her pride, exclaiming that such heavenly forms

as she should be worshiped, not dared be loved by men of low degree. He tells her too that he is forty years old. At last, toward the end of the year, he thinks he sees signs of change, and of hope for the new year which is about to come. Then he says that he is in sight of that happy shore toward which his sore-tost bark has so long been urging. And then, then—let all the little loves clap their hands for joy—she yields indeed, and disdain and indifference and long reserve are swept away in the rush of happy passion.

Struggle, fear, doubt and despair melt and are lost in the serene air which breathes round the two, the poet and his love: he has no reproaches, she no repulses to offer.

He is not a boaster and gives never a sign of self-satisfied triumph. "Comming to kisse her lyps" he begins, and then adds in a parenthesis, ("such grace I found").

She is trembling still, but he bids her not fear to lose her liberty, for that they shall be willing captives each to the other, and both free though kept within that fair demesne where

"Spotless pleasure builds her sacred bowre."

The last sonnets were written, it is plain, during the period of betrothal; after marriage he probably found, as one of his own friends had said, "that silence was the perfectest herald of joy," that one being but little happy who could elaborate sonnets to say how much.

During this phase he is, however, very outspoken in a way which the manners of to-day quite forbid, and though we are probably right, from a practical point of view, in saying *fie* when we do, it is nevertheless really like drawing in a freer air to escape to the Tudor age, from a squeamish generation which, divorcing the spirit from the body, damns, as did the Manichæan of old, half the natural motions of flesh and blood. The poet looks forth upon the gracious heritage which he is soon to possess, and how goodly it all seems to him he never hesitates to tell. Do not mistake, however, it is of her virtuous mind of which he has by far the most to say; and though, as he sings,

"Faire is my love, when her fayre golden haire"

"With the loose wynd ye waving chance to marke"

"Faire when the rose in her red cheekes appears"

“Or in her eyes the fyre of love does sparke”
 “Fayre when her brest lyke a rich laden barke”
 “With pretious merchandise she forth doth lay”

etc., etc. But the fairest of all is she when she opens her lips

“Through which her words so wise do make their way”
 “To beare the message of her gentle spright”

and whether or not he succeeds in raising himself to her lofty measure, he never will her sacred peace molest, Sonnet LXXXIII. being not the least tribute which he lays at her feet.

On Easter Day he hallows his passion by calling down upon it the blessing of the risen Lord, and now spring coming he asks that herald of Love's mighty king to go to her winter bower and bid her to make herself ready “to wayt on Love amongst his lovely crew.”

How different it is now from what it was before she had told him that she loved him. He is sitting by her while she “bends over her embroidery—her “drawen worke”—whose design is a bee for whom a spider is lying in ambush among leaves of woodbine and eglantine, which make up the border: She turns to him and says, “You are the spider and I the simple bee whom you have thrallled;” and he says, “I joy to have you confess that you are thrallled: and who would not be content to be captive within the odoroule confines of these sweet plants.”

We next are told by him of his three Elizabeths, his mother, his queen, his love.

Something then parts them, for he is a prisoner to care, but sends his heart to fly to her as a bird whom she will lodge in her bosom. His place of exile is by the sea, for he writes her name on the wet sand, and when thrice the tide washes it away; he then resolves to write it only in his verse, that both may endure for aye. Next in vain he goes in search of her in field and in bower, but looks within himself and finds her there.

He has finished six books of the Faery Queene, and stops to rest from his work, that he may begin with fresh strength. In the meanwhile he labors at what is no labor, and sings his love's sweet praise. But though he sings to the whole world, the world “that cannot deeme of worthy thing,” looks upon all this as poet's flattery. He, however, the aristocrat of taste, cares little whether the world chooses to envy or to wonder at his love's perfection.

Better the latter than the former, but in any case they cannot truly appreciate. Did not the crowd, when lovely Florimell stood radiant before them, give their worthless plaudits to the witch's simulacrum, the false Florimell? "So feeble skill in perfect things the vulgar has."

Nor is this all: some meddler comes between him and his love and stirs up "coles of yre." A curse upon the evil tongue!

Again he is banished, and through the tedious days he prays for night, and in interminable darkness longs for the sun. He goes wrapt in the thought of that image which is the light of his life. He is like the culver on the bared bough, pining for its mate.

And then, we may well believe, came his recall, after which there was no separation, let us hope, during the four years—those years, Postumus, which are ever fleeting, fleeting: only four years, a short span, indeed, but long enough to allow the fruition of a love, passionate and assuredly loyal; to him, though life was dear, love was dearer; though of gold he had sad need, more precious was fame; but dearer and more precious than life or love or fame or gold was, he has told us, his plighted word; long enough to bring about the blessing of a fruitful marriage-bed, for after that lurid catastrophe at Kilcolman—a tragedy, supposing the tale of the child left in the burning house to be untrue; if true, then a horror—after the few weeks or months of prostration that followed; and after his Hymne to Earthly Love having reached a higher strain, he was called upon to sing his Hymne to Heavenly Love for the first time in the Courts of Paradise:—after all this, I say, when at last what was mortal of Edmund Spenser was laid in a grave in Westminster Abbey, his friends crowding about to pour upon the coffin their chaplets and odes, there were left behind to mourn him, not with odes and with chaplets, but as any husband and father among us may be mourned, besides his widow, two sons, Silvanus and Peregrine, so called probably because born far away from England, in the wilderness by the green alders of Irish Mulla. About her thereafter one does not speculate: her poet had celebrated her when she was fair, and that retrospect always remained to her—could widow claim a richer dower?—but those boys with the odd names, what became of them?

“LET THERE BE LIGHT.”

THE opinion seems to be increasingly prevalent that the Bible contains the highest revelation of moral and religious truths which has ever been given to man, but that it was never intended as a revelation of scientific truth. Although it has abundant allusions to natural phenomena, they are supposed to have been introduced either by way of illustration or embellishment, or as expressions of the personal views of the writers, without any intention on their part to claim any supernatural sanction for their statements.

Geology is largely chargeable with the change of sentiment, which has sought either to confirm or to discredit Biblical teachings by a comparison with the teachings of nature; and the first chapter of Genesis furnished one of the earliest points for skeptical attack. There are probably few who regret the change, few who believe that there can be any real conflict between the logical deductions of science and the direct illuminations of supernatural vision, few who shrink from any fairly conducted inquiry into the grounds of their most cherished opinions. But there are many who believe that there always have been, and still are, other avenues to truth than the evidence of the senses or the deductions of the reasoning faculties; that there have often been gifts of unclouded vision or of prophetic anticipation, which defy all ordinary methods of explanation; that there are more things in heaven and earth than are dreamt of in our philosophy. Those whose sentiments are most catholic, and who are, therefore, ready to accept enlarged views, come from whatever quarter they may, see that subjective intuitions are often asserted with as perfect honesty, as undoubting certainty, and as legitimate claims upon our belief, as objective perceptions; and that any investigator must, almost of necessity, become narrow and one-sided, who confines himself exclusively either to the “positive,” the metaphysical, or the theological aspects of truth.

The grandeur of the theme, as well as the sublimity of the language in which the Scriptural account of creation is couched, has led many to admire the “poem” of Genesis, even though they were convinced that it had no higher sanction than poetical imagi-

nation. They are, however, often disposed to ridicule the attempts of devout men, like Chalmers and Hugh Miller, to reconcile the account with scientific facts, by changing interpretations suggested by the progress of scientific discovery. Is not such ridicule quite as unfair on the positivist side, as the *odium theologicum*, against which so much complaint has been justly made, on the religious side? Is it not a virtual begging of the question? No genuine revelation can be grasped in its full extent by any one whose faculties are either insufficient, or are not properly educated, or are too much biased by prejudice, to allow a complete understanding. But if we believe that our race is making continual progress, we must also believe that it is acquiring capacities for broader views of truth. It would then seem that the best possible evidence of supernatural illumination or guidance, would be such perfection of teaching as would always leave room for new interpretations, always offering something in advance of all possible enlightenment, something adaptable to the wants of every condition,—something still to be attained, let attainment go as far as it may.

There is a poem written, in everlasting runes, upon the heavens, so plainly "that he may run that readeth it," and yet so like that other poem which we were taught at our mother's knees, that it may be worth while to glance at it, even if from no higher motive than the gratification of an idle curiosity. The language in which it is phrased is the language of angels; the music of its accompaniment is the music of the spheres; the task of him who would translate it, is to change the story of eternity and immensity from immortal into mortal speech. When such a work has already been done as well as the imperfections of language will allow, one may be well excused from trying to repeat it, and for choosing the more modest role of a commentator or an expositor.

"Let there be light, and there was light." How small seems the cavil, made so long ago and so oft repeated, that no genuine revelation would have assigned to the creation of light a precedence over the creation of the sun, moon, and stars. No one, who reads the narrative candidly, will believe that the writer was entrapped by a palpable absurdity; he must, therefore, have had some meaning not easily refuted, and it is more than likely that, if we were able fully to grasp his meaning, it would command our profound admiration. The questions, how and why, are always

getting themselves asked, and theologians and philosophers, in early as well as in latter days, have ever speculated upon ultimate physical agencies, looking sometimes to the gross, sometimes to the impalpable,—now to Earth, anon to Fire, Air or Water,—as either the mediate or the immediate origin of all things; the sanction of a great name always giving temporary currency to views which the admiring multitude received with unquestioning faith. Through nearly all the shifting phases of doctrine, the belief in the supremacy of intelligence appears to have exerted a modifying influence; and there has been a consequent general disposition to look to the seemingly least material of material agencies, to fire or æther, as the nearest in kinship to spirit. Few seem to have regarded simple light as the organizing or developing force, and, even at the present day, most men would probably be more ready to believe that heat or electricity was the primal “mode of motion,” than to assign that dignity to light. But both heat and electricity are apparently local phenomena, existing or manifested, so far as we know, only in consequence of special disturbances or transformations. The most profound students of thermodynamics, almost without exception, have accepted the conclusion that heat-radiation tends towards ultimate stagnation and ultimate death, while the researches of Lloyd, and Stoney, and Chambers, show that the only intercosmical manifestations of electric force, the solar and lunar influences upon terrestrial magnetism, are not due to any direct magnetic action. More recent investigations have shown such accordances in these manifestations, both in form and magnitude, with disturbances of gravitation, as to leave little room for doubting that they are due to thermal and tidal changes, upon and within the earth itself.

Weber and Kohlrausch, Thomson and Clerk Maxwell, have found that “if the units of length, mass and time are the same in the two systems, the number of electrostatic units of electricity contained in an electromagnetic unit is numerically equal to a certain velocity.”¹ By means of the laws of variability in central forces it was found “that the velocity of light and the ratio of the units are quantities of the same order of magnitude,” and it has been inferred “that light is an electromagnetic disturbance, propagated

¹Maxwell, *Electricity and Magnetism*, ii., 243.

in the same medium through which the electromagnetic actions are transmitted."³ It would seem more reasonable, in view of what has just been said about the disturbances of terrestrial magnetism and the universal diffusion of light, to say that "electromagnetism is a luminous disturbance," or, in the cautious spirit of Faraday, to view both light and electromagnetism as motions in the same all-pervading æther; but, however we may choose to express it, the interesting fact is the identification of velocity in light and electricity, which, in connection with the modern thermal and chemical investigations, bring light, heat, electricity and chemical affinity, with all their varied phenomenal manifestations, into evident and intimate correlations.

Edlund, by a series of investigations which are not yet concluded, starting from a modification of Mossotti's theory, shows that all electrical and many chemical phenomena can be satisfactorily explained by assuming that a certain portion of æther is attached to particles of matter, while another portion is free, and that electricity consists in a transfer of free æther. The difficulties involved in such an assumption were well stated by President Lovering, in the following paragraph from his Hartford address before the American Association:

"After Fresnel and Young had secured a firm foothold for Huyghens' theory of light in mechanics and experiment, questions arose which have perplexed, if not baffled, the best mathematical skill. How is the ether affected by the gross matter which it invests and permeates? Does it move when they move? If not, does the relative motion between the ether and other matter change the length of the undulation or the time of oscillation? These queries cannot be satisfactorily answered by analogy, for analogy is in some respects wanting between the ether and any other substance. Astronomy says that aberration cannot be explained unless the ether is at rest. Optics replies that refraction cannot be explained unless the ether moves. Fresnel produced a reconciliation by a compromise. The ether moves with a *fractional* velocity large enough to satisfy refraction, but too small to disturb sensibly the astronomer's aberration."

Inasmuch as the repeated communication of a progressive motion equivalent to one five hundredth, of one millionth, of one

³ Maxwell, *Electricity and Magnetism*, ii., 387.

millionth, of one millionth, of the length of each light wave, would be sufficient to account for the greatest possible manifestation of gravitating force in the solar system, there need be no difficulty in granting all the æthereal mobility that Edlund would probably ask, and in according him a distinguished position in the ranks of Scandinavian science.

In 1852 M. Lamé, in a work quoted by Edlund, wrote: "It is impossible to arrive at a rational and complete explanation of the phenomena of physical nature, without interposing the agent [the universal æther] whose presence is inevitable. It cannot be doubted that that interposition, wisely guided, will discover the secret, or the true cause, of the effects which are attributed to caloric, to electricity, to magnetism, to universal attraction, to cohesion, to chemical attractions; for all these mysterious and incomprehensible beings are, in the main, merely hypotheses of coördination, doubtless useful in our present ignorance, but eventually to be dethroned by the progress of true science."

This faith in a unity of force, in harmony with the Supreme Unity of intelligent supervision, has long been the guiding principle of the most successful physical investigators. Some of its fruits we have already seen; in the search for others we may be aided by the following considerations:

1. All the mathematical and other *a priori* reasonings, which depend upon a reference to given centres, lines, surfaces, or volumes, have regard to force in general, being entirely independent of the name or nature of the forces or phenomena which are subjected to special study. We should, therefore, be always on our guard against looking upon the results of any such reasonings as indicative of precedence in any special form of force.
2. Action and reaction being always equal and in opposite directions, the magnitudes of force may often be determined by inquiring into the aggregate results of impulses or resistances, without trying to penetrate into their details.
3. The rigidity of force-lines as exemplified in the gyroscope, and the conservation of areas as exhibited on the most stupendous scale in cosmical orbits, often furnish satisfactory clews to the relative values of coördinate forces.
4. All vibrations, whether of pendulums, waves, planetary rotation, orbital revolution, or other cyclical recurrent motion, when

once established tend to perpetuity, unless modified or counteracted by favoring accelerations or opposing resistances.

5. In the comparison of forces exerted upon different masses, regard should be paid both to mass and velocity. But in discussing different operations upon the same mass, the respective velocities may be taken as adequate exponents of those operations, and as trustworthy guides to the value of the primitive force or forces.

The mathematical laws of gravitation, in all its various manifestations, including the reference of Kepler's wonderful harmonies to simple sections, of cones of force referable to definite centres or axes, well illustrate the first of these postulates; and Newton's caution in advancing his ideas as merely "hypotheses of coördination," leaving the cause of the activity which they represented entirely out of question, is an enduring example of philosophic prudence. A large portion of the Principia is quite as applicable to light, heat, and electricity, as to gravitation; and many of the most newly discovered thermo- and electro-dynamic laws are general laws of simple centripetal or centrifugal force, which may be as well illustrated by stellar, planetary, cometary, or meteoric phenomena, as by the special occurrences which led to their discovery. Another illustration of the postulate may be found in an analogy between barometric pressure and nebular structure. A fundamental principle for the use of the barometer in hypsometric engineering, is given in the following proposition from Frazer's Mechanics: "Gravity being assumed uniform, as the height above the surface of the earth increases in arithmetical progression, the densities of the air decrease in geometrical progression." This is a simple consequence of elasticity; therefore, if the hypothesis of a uniform and uniformly active, universally diffused, undulating, elastic æther is true, we may reasonably look for some evidence of its truth in cosmical arrangements. Such evidence is found in a parabolic spiral, extending from one of the nearest fixed stars (a *Centauri*) to the sun, and fixing the several planetary positions. This spiral is doubly interesting, both from manifesting the universal diffusion of an elastic medium, and from embracing the solar *modulus*³ of light as a determining ordinate.

³The *modulus* of an elastic medium, is "the height of a homogeneous atmosphere," or twice the virtual fall which would yield a velocity equivalent to that of undulation in the medium. The modulus of light, at Sun's surface, is about seventy-three times Neptune's mean radius vector.

The second postulate introduces us to all the phenomena of inertia, with their practical application to the accumulation, graduation and regulation of force, and with scientific consequences which are at present only faintly shadowed forth. It is not yet a quarter of a century since Foucault first exhibited his pendulum in the Paris Pantheon, ingeniously drawing, from its tendency to maintain constancy or parallelism of motion, an optical demonstration of the earth's daily rotation. Like tendencies have already been traced in the daily atmospheric tides which are recorded by the barometer, in magnetic variations, in chemical combinations, in the average temperatures of different latitudes, and in many other physical phenomena; so that the Torricellian column, the compass needle, the explosion of gases, and the thermometric scale, all furnish delicate and mutually corroborative tests of solar mass and distance. Every wave of ocean, every breath of air, every quiver of the flashing aurora, is a tremulous balance, swayed by the Earth on one beam and the Sun on the other, and there is only need of eyes sufficiently trained to read the scale aright, in order to weigh, in our own laboratories and at our own firesides, our central star and each member of its train. The first attempt at such household estimates was made in 1849, by Fizeau, who measured the velocity of light by means of the alternately eclipsing and revealing teeth of a swiftly rotating wheel. Foucault, in 1862, measured the same velocity by a revolving mirror, obtaining a result about six per cent. less than Fizeau's. Cornu, who has been for some time engaged in repetitions of Fizeau's experiment, lately published his final estimate before any calculations could be made from the observations of the recent transit of Venus, in order that the accuracy of his method might be fully and fairly tested. His conclusions are remarkably accordant with those at which Newcomb arrived after a re-discussion of the most trustworthy astronomical observations; so that the accuracy and judgment of a distinguished American astronomer have been strikingly affirmed by the careful manipulation of a distinguished French physicist. During the past seven years various inertia estimates have been published, which are likewise awaiting the test of the Venus transit, and which differ from Cornu's final result only in amounts varying between one-thirteenth of one per cent., and seven-tenths of one per cent.

The third postulate may be regarded as, in some sense, a consequence of inertia, and therefore as a corollary of the second, rather than as an independent proposition. There are, however, some important matters still under debate, toward the satisfactory solution of which it may, perhaps, be serviceable as a guide. Two of special moment are the velocity of gravitating action, which, according to the calculations of Laplace, cannot be less than eight million times the velocity of light, and the rigidity of the earth, which Hopkins and Thomson, reasoning from the phenomena of nutation and precession, estimate to be greater than that of steel. Lovering very properly remarks that Laplace's data "would now, probably, require a numerical correction," and Thomson's speculations upon molecular force and atomic constitution, open a wide and wholly unexplored field for the possible display of elastic energies, which may, possibly, transfer the requisite rigidity from the passive recipient, either to the active force or to the medium through which the force is manifested. Indeed, according to the commonly accepted hypotheses, all rigidity must reside in force-lines; for, if there are any such things as material atoms, they must be inconceivably minute, and their respective æthereal atmospheres are supposed to be vastly more voluminous than the atoms themselves, so as to render contact impossible. In a substance either of infinite elasticity or of no density (and therefore spiritual?) undulations would be propagated with infinite velocity. It is easily conceivable that the transverse vibrations of luminous waves, which have been studied, are accompanied by co-ordinate longitudinal undulations of much greater speed, which have hitherto escaped notice, or that there is some other kind of velocity to be considered than that of simple undulation. The æthereal packing occasioned by the millions of millions of millions of waves, which, as has been stated, contribute to each gravitating movement, may also accompany chemical and cohesive attractions, producing either an enormous rigidity, or an enormous elasticity, in the direction of the movement, which would be more than sufficient to account for every possible material manifestation.

Since the earliest days of that remote beginning "when the morning stars sang together," the ever-recurring cyclical and rhythmical movements of orbs, "still quiring to the young-eyed

cherubim," have been ceaselessly proclaiming the truth of the fourth postulate. "Day unto day uttereth speech, and night unto night sheweth knowledge." The changing seasons, the "stars in their courses," the waxing and waning moon, the ebb and flow of tides, the alternations of cloud and sunshine, storm and calm, have appealed to the curiosity of man, stimulating his intellectual activity and arousing the religious sentiment which brings him into a more intimate communion with his Maker. There is "no speech nor language, where their voice is not heard," and the harmonies of which they are the unfailing tokens, are not only the source of a pure and ennobling æsthetic zest, but they are also the storehouses of guiding analogies which furnish the most suggestive hints for scientific discovery.

One reason for this fruitfulness of suggestion may be found in the seeming self-evidence of a necessary bond between likeness and sameness, which gives the hints an intuitive, rather than a deductive character; another, in the fact that nearly all activity involves tendencies to equilibrium between antagonistic forces, which may be expressed by mathematical formulas, under the first category. The relations between central energy, distance and velocity, have no dependence upon the nature of the energy; therefore, if all forces have a common origin, central pointings should exist in every pulse-throb of life or motion. One striking instance of such joint pointings may be found in the following comparison between visible and audible waves.

The lowest *do* of the musical scale, (C_{-3}), represents sixteen atmospheric vibrations per second, the corresponding mean equatorial wave-length being 860.5 inches. The number of vibrations in a given time being doubled for each ascending octave, the twenty-sixth *do* (C_{26}), would have 536,870,912 vibrations per second, each wave-length being .00002564 of an inch, agreeing very closely with that of the Fraunhofer C-line (.00002586), and thus making the corresponding octave directly comparable with the prismatic spectrum. The following table gives a comparative exhibit of the wave-lengths, in hundred-millionths of an inch, of the twenty-sixth musical octave, with those of the Fraunhofer lines according to Angström's measurements:

<i>Fr. Lines.</i>	<i>Length.</i>	<i>Musical Notes.</i>	<i>Length.</i>	<i>Deviation.</i>
A	2997	A	3077	+ .0267
B	2707	B	2735	+ .0103
C	2586	C	2564	— .0085
D	2322	D	2279	— .0185
E	2076	E	2051	— .0124
F	1915	F	1923	+ .0042
G	1697	G	1709	+ .0071
H	1550	A	1538	— .0077
Mean Arith.	2231	Mean Arith.	2234	+ .0013
Mean Geom.	2180	Mean Geom.	2180	.0000

The singular coincidence by which the same names have been given to the principal nodes in the luminous octave and to the corresponding notes of the diatonic scale, would be commonly regarded as accidental. There is, however, an obvious reason for the similitude, in the convenient use of alphabetical letters to designate orderly sequences. Accidental resemblances are often spoken of, but they are much rarer than is generally believed; and in every supposed instance, the mathematical improbability of any symmetry arising by chance, increasing, as it does, in geometrical ratio with each additional coincidence, should encourage us to seek for some underlying cause, whenever our attention is drawn to any new harmony.

All musical scales being more or less artificial, one might be constructed which would agree more closely with the luminous gamut than any hitherto proposed. But the laws of Nature are always flexible, allowing such variety in unity as precludes the necessity for perfect homogeneity, compensating perturbations of one kind by those of another, and thus contributing to the general stability. The greatest deviation from exact accordance in the present case is two and two-thirds per cent., and there can be no hesitation, in any single instance, as to the lines and notes which are mutually comparable. The tendency to minor intervals in the spectrum, the closeness of the agreement at F, which has been called "the key note of nature," the exact equality of the geometrical means, and the kind of harmony which is thus indicated between sight and hearing, our two principal avenues of knowledge, have something more than a merely curious significance.

All vibrations in elastic media tend to excite harmonic vibra-

tions, with wave-lengths which may be expressed by simple fractions, either multiple or sub-multiple, of the primitive wave-length. In the harmonic, as well as in the fundamental waves, there are nodes of comparative rest, at which any loose particles of matter tend to congregate, and vibrating segments of great relative motion, from which such particles are driven. These tendencies are beautifully illustrated in the Chladni plates, which are covered with fine sand and then set in musical vibration, when the sand collects in nodal lines, possessing great symmetry of form, the same forms being always produced on the same plate under the same conditions. Numerous harmonies of this character have been pointed out in the solar system, the one which has acquired the greatest reputation being known as the Law of Titius, or Bode's Law. The phyllotactic analogy of Peirce and Hill, is of more peculiar interest, since it is not empirical, but its discovery resulted from an *a priori* suggestion, and showed that a similar law holds good both in plants and in planets; distributing the leaves most evenly around the stem, so that they may all share in the sunlight, air and moisture, and the planets most evenly around the sun, so that their equilibrium need not be destroyed by any uncompensated accumulation of perturbations.

If the ratios of distance from the sun are compared with those of a harmonic series, we find that the musical intervals are generally such as to produce chords between any two adjacent planetary positions. But where quarter-tones occur, the discordant vibrations appear to have broken up or disturbed the tendencies to planetary aggregation, aiding in producing the asteroidal belt, giving Mars and Mercury their great eccentricity, and obliterating a planetary nucleus which seems once to have existed between Mercury and Venus. So numerous are these indications of harmonic influence, and consequently of an elastic æther to which the influence is attributable, that a communication was presented to the American Philosophical Society on May 2, 1873,⁴ giving five terms of a harmonic series, of which the fourth, (seven twenty-sixths of earth's mean distance from sun,) was stated to represent "a possible unknown planet, planetoid group, or other seat of solar and planetary perturbation, with a period of

⁴See also *New York Tribune*, of same date.

53.54 days; the fifth, a planet with a period of 34.25 days; Kirkwood's estimated period being 34.92 days." About seven weeks after this publication, on June 19, a communication was made to the Royal Society by Messrs. De La Rue, Stewart and Loewy, adducing evidences of a tendency in sun-spots, "to change alternately from the north or positive to the south or negative hemisphere, and *vice versa*," and attaching special significance to the fact "that *the two outbreaks are at opposite ends of the same solar diameter.*" Their conclusions were based on three sets of observations, taken in three different years, and extending over periods, respectively, of 145, 123, and 139 days. Their lowest approximate estimate of the interval between two maxima of the same sign, and *originating at the same axial extremity*, was 44.5 days; the highest, 56 days; "the most probable mean value" 50.4 days.

Such prompt verification of astronomical prediction is remarkable. There is still a considerable margin of uncertainty between the lowest and highest estimates, but the evidence appears to be conclusive, of some harmonic disturbing force, revolving around the sun in a period approximately equivalent to two solar rotations. There are other indications, perhaps even more cogent, of an asteroidal belt at twice Neptune's distance. The existence of cosmical bodies, within Mercury's orbit and beyond Neptune's, has long been suspected, and Leverrier's recent investigations have confirmed the suspicion; but no attempt seems to have been made to indicate their position, except the one to which reference has just been given.

All of these harmonies are directly referable to central forces, and most of them to that form of central force which seems to know no bounds to its far-reaching sway, the force of universal gravitation. The common cõordination, which links all as parts of a concordant whole, pointing to a uniform energy as the mediate source of all material phenomena, may be sought by means of the fifth postulate.

In cosmical movements there are three prominent velocities, which may vary so as either to approach towards, or to recede from equality, the laws of variability being the same as in all other central forces:

The velocity due to revolution in a circular orbit at a given

distance from the centre, varying inversely as the square root of that distance ;

The velocity of rotation, for a central mass expanded or contracted to a given radius, varying inversely as the radius, rotation being simply revolution retarded by internal work or resistance ;

The velocity of gravitating fall at a given point, which is equivalent to the square of the velocity of circular revolution divided by the distance from the centre, and varies inversely as the square of that distance.

By finding the three velocities at any point in space, since they all vary at different rates, we may readily ascertain the common velocity towards which they all tend, or, in other words, the originating velocity to which they are all due. The second postulate makes us entirely independent of any considerations as to the nature of matter or force. We may accept the theory of Boscovich, who regarded atoms as mere mathematical points which served as centres of force ; or we may believe in the infinite divisibility of matter ; or we may simply admit that there are various internal resistances of unknown character ; in either case, the amounts of resistance and the point at which they would all disappear, are the only things that need claim our attention.

The limits of equality towards which the prominent velocities tend, may be sought either in the direction of the tangential force, (the force of inertia,) or in the directions of the radial forces (the centrifugal and centripetal forces).

When the tangential velocities of rotation and of revolution become equal, we reach the limit between possible total aggregation and commencing dissociation. If still further shrinkage of volume were to take place, the rotating and revolving particles would gradually assume orbits of increasing eccentricity. All cosmical rotations of which we have any knowledge, even that of the sun itself, partake of the character of eddies, the rotary motion being accompanied by a motion of translation, or of orbital revolution. The motion of each particle is therefore the resultant of radial oscillations and orbital progression.

The radial velocity acquired by fall from an infinite distance to a given point, is the square root of two times as great as the velocity of circular revolution at that point, and is the same as the wave velocity which would be communicated by virtual fall

from the same point to the attracting centre. When this velocity becomes equal to the mean velocity of the radial oscillation which is due to rotation, the centrifugal and centripetal velocities are equal, and we reach the limit between total dissociation and commencing aggregation.

The eight primary planets of the solar system are grouped in two belts, which are separated by the cluster of asteroids. The principal orbs of the respective belts, Earth and Jupiter, exert a controlling influence over the subordinate planets, which stand to them somewhat in the relation of satellites. This subordination is shown, not only in differences of volume and of inertia, but also in the amounts of aggregating force.

Our entire system is supposed to be slowly cooling. The radiation of internal heat involves a gradual shrinkage of volume, and a consequent increase in the velocity, both of rotation and of possible free revolution. If the shrinkage were to continue indefinitely, the rotating would gain upon the revolving velocity, until, by successive steps, the limiting velocities were attained.

The spectroscope reveals a material structure, in other globes, like that of the Earth. It is, therefore, reasonable to suppose that similar laws of chemical and cohesive attraction prevail throughout the universe. Tyndall thus expresses one of the most important of those laws: "It is a noteworthy fact, that as the specific heat increases, the *atomic weight* diminishes, and *vice versa*; so that the *product* of the atomic weight and specific heat is, in almost all cases, a sensibly constant quantity. This illustrates a remark already made, that the lighter atoms make good by velocity what they want in mass."⁵ By means of the "internal work" accomplished by the specific heat, all the chemical elements may be readily compared with hydrogen, which is the lightest known element. The most abundant compound into which hydrogen enters is water, which consists of two atoms of hydrogen in chemical combination with one atom of oxygen. At the moment of combination, or at the limit between association and dissociation, there is an explosive oscillation, disturbing the inertia-movements of the particles, with reference both to the Earth and to the Sun. The amount of internal force, or the "kinetic energy," involved in the combination, has been carefully estimated by several emi-

⁵ "Heat a mode of Motion," Amer. Edit., 1873, p. 130.

nent experimenters, their independent results exhibiting a very close agreement. A careful examination of those results, with reference to the comparative reaction of Sun and Earth upon the disturbed inertia, shows that the kinetic energy of dissociated water bears the same ratio to the kinetic energy of terrestrial revolution, as the mass of the Earth bears to the mass of the Sun, and *all chemical attractions are thus brought into simple correlation with gravitating attraction.*

If the possible gravitating force, as exhibited in equatorial orbital revolution, were to increase at uniform rates, throughout the system, in consequence of the hypothetical shrinkage, a calculation of the tangential and radial limiting velocities would show the four following successive degrees of subordination :

1. The limit of dissociation would be reached in all of the subordinate planets, before they had attained the limiting velocity of aggregation in the principal planets of their respective belts, Earth and Jupiter.⁶

2. The limit of dissociation would be reached by Earth and Jupiter, when they had attained the present limiting velocity of circular revolution at the mean centre of gravity of the three controlling bodies, Sun, Jupiter, and Earth.

3. The limiting velocity of solar aggregation bears the same ratio to the velocity of light, as the diameter of a circle bears to its circumference. The formation of cosmical masses seems, therefore, to be owing to a kind of circular polarization of æthereal waves, originating in resistances of inertia.

4. The limiting velocity of solar dissociation, and the consequent boundary between the formative and the disruptive forces of the entire system, is *the velocity of light.*⁷

⁶The times of rotation are not known with much precision, for any of the planets except Earth and Mars. There is a slight uncertainty in Jupiter, Venus and Mercury, and a still greater one in Saturn and Uranus. But all the observations that have been made agree in indicating this dependent relation of the subordinate planets to their principals.

⁷Our readers may determine the limiting velocities for themselves, by the following method :

Let v_0 = the limiting velocity; v_1 = velocity of rotation of a constrained equatorial particle; v_2 = velocity of revolution of a free equatorial particle. Then

For the tangential limit: $v_0 = v_1^2 + v_2$

For the radial limit: $v_0 = \pi v_1^2 + v_2$

What is light? Ganot defines it as "the agent which, by its action on the retina, excites in us the sensation of vision." That agent is now generally believed to be an undulating æthereal medium, the undulations being propagated with a velocity equivalent to .0020087 of the sun's mean distance from the earth, per second. The waves of such a universally undulating sea, encountering centres of inertia, would originate simultaneous centripetal actions and centrifugal reactions, which by their joint tendencies towards equilibrium, would give rise to material phenomena of various kinds. A communication by Professor Lovering to the Dubuque meeting of the American Association, gives some interesting illustrations of the cumulative effects resulting from small vibrations regularly repeated, and the simplest theorems of central force show that movements of the greatest magnitude may be produced by a sufficient number of slight successive impulses. Cosmical revolutions are the most stupendous that we know, and yet they are made up of the aggregate motions of inconceivably minute particles, each of which is supposed to be surrounded by a voluminous æthereal atmosphere, and subjected to the continuous impact of waves recurring with a frequency of hundreds of millions of millions per second.

There is then nothing incredible in the hypothesis that light, as defined by Ganot, is the physical originator of all forms of motion, and consequently of all material forces. Therefore when we find a common pointing in all physical investigations, whether they are pushed towards the electrical, chemical, thermal, or structural phenomena which fall under the immediate cognizance of our senses, or to the ultramundane revelations of practical and mathematical astronomy which compass the whole visible universe, we need not hesitate to accept their sure indications of an omnipresent primordial energy. With such acceptance, scientific candor seems to compel the admission that the Seer was right, when he proclaimed that the first step towards the organic development which should bring order out of chaos, was the fiat of the Divine Word: "LET THERE BE LIGHT." "For He spake, and it was done,—He commanded, and it stood fast."

PLINY EARLE CHASE.

THE EARLY LITERATURE OF TOBACCO.¹

IN 1577 there appeared in London probably the earliest detailed account in the English language of the herb Tobacco, entitled "*Joyfull news oute of the newe founde worlde*," Englished by John Frampton, Marchant. It was a translation of a work by Nicholas Monardes, published at Seville in 1571.

"This Hearbe," says Monardes, as translated by Frampton, "which commonly is called *Tabaco*, is an Herbe of much antiquitie, and knowen amongst the Indians, and in especially among them of the new Spayne, and after that those countries were gotten by our Spainardes, beyng taught of the Indians, they did profite themselues with those things, in the wounds which they receiued in their warres, healing themselues therewith to the great benefite.

"Within these few yeeres there hath beene brought into Spayne of it, more to adornate gardens with the fairnesse thereof, and to giue a pleasant sight, than that it was thought to have the maruellous medicinable virtues, which it hath, but nowe wee doe vse it more for his vertues, than for his fairenesse. For surely they are such which doe bring admiration.

"The proper name of it amongst the Indians is *Picielt*, for the name of *Tabaco* is geuen to it by our Spainardes, by reason of an Islande th at is named *Tabaco*.

"One of the meruelles of this Hearbe, and that which bringeth most admiration, is, the maner howe the Priestes of the Indias did vse it, which was in this manner: When there was emongest the Indians any manner of businesse of greate importance, in the which the chiefe gentlemen called *Casiques*, or any of the principall people of the countrie, had necessitie to consult with their Priestes, in any businesse of importance, they went and propounded their matter to their Chiefe Priest: forthwith in their presence, he tooke certaine leaues of the *Tabaco*, and cast them into the fire, and did receiue the smoke of them at his mouth, and at his nose with a cane, and in taking of it, hee fell downe

¹ See the notes by Edward Arber, to "A Counterblaste to Tobacco." English Reprints. London: 5 Queen Square, Bloomsbury, W. C.

vppon the ground, as a dead man, and remaying so, according to the quantitie of the smoke that he had taken, and when the hearbe had done his worke, he did reuiue and awake, and gaue them their answers, according to the visions and illusions which hee sawe, whiles he was rapte in the same manner, and he did interprete to them, as to him seemed best, or as the Deuill had counselled him, geuing them continually doubtfull answeres, in such sorte, that howsoever it fell out, they might say that it was the saune which was declared, and the answer that he made. In like sort the rest of the Indians for their pastime, doe take the smoke of the *Tobaco*, too make themselues drunke withall.

John Liebaut² says (1570) “*Nicotaine*, although it bee not long since it hath bene knowne in France, notwithstanding deserueth palme and price, and among al other medicinable hearbs, it deserueth to stand in the first rank, by reason of his singular vertues, and as it were almost to bee had in admiration. * * This Hearbe is called *Nicotaine*, of the name of him that gave the firste intelligence thereof vnto this Realme, as many other plantes have taken their names of certayne Greekes and Romaines, who hauing bene in straunge countries, for seruice of their common Weales, haue brought into their countries many plants, which were before vnknowne. Some haue called this Hearbe the Queenes Hearbe, because it was firste sent vnto her, as heereafter shalbe declared by the Gentleman, that was the first inuenter of it, and since was by her giuen to diuers to sowe, whereby it might bee planted in this lande. Others haue named it the great Priors hearbe, for that he caused it to multiply in Fraunce, more than any other, for the greate reuerence that he bare to this hearbe, for the Diuine effects therein contayned. Many haue giuen it the name *Petum*, which is indeede the proper name of the Hearbe, as they which have trauelled that countrie can tell. Notwithstanding, it is better to name it *Nicotiane*, by the name of him that sent it into Fraunce first, to the ende that hee may haue the honour thereof, according to his desert, for that hee hath enriched our countrie (i. e.

² Liebaut, a French doctor, edited several editions of Charles Estienne's *L'Agriculture, et Maison Rustique*, in 1564, 1565, 1570, etc. The above is taken from the edition of 1570, p. 79, b. ii., c. 76, as translated by Frampton, who attributes it to another author.

France) with so singular an Hearbe. Thus much for the name, and nowe harken further for the whole Historie."

Then follows Nicot's own account of the introduction of Tobacco into France, within the decade preceding his relation:

"Maister Iohn *Nicot*, Counsellor to the King, being Embassadour for his Maiestie in Portugall, in the yeare of our Lorde, 1559. 60. 61. went one day to see the Prysons of the King of Portugall: and a Gentleman beeyng the keeper of the sade prisons presented him with this hearb, as a strange Plant brought from *Florida*. The same Maister *Nicot*, hauing caused the said hearb to be set in his Garden, where it grewe and multiplied maruellously, was vpon a time aduertised, by one of his Pages, that a young man, of kinne to that Page, made asaye of that hearbe brused both the hearbe and the Luise together vpon an vlcer, which he had vpon his cheeke neere vnto his nose, comming of a *Noli me tangere*, which began to take roote already at the gristles of the Nose, wherewith hee founde himselfe maruellously eased. Therefore the sayde Maister *Nicot* caused the sicke young man to be brought before him, and causing the said hearbe to be continued to the sore eight or ten daies, this said *Noli me tangere* was vtterly extinguished and healed. * * Within a while after, one of the Cookes of the sayde Embassadour hauing almost cutte off his thombe, with a great chopping knyfe, the Steward of the house of the sayde Gentleman ran to the sayde *Nicotiane*, and dressed him therewith fiew or six tymes, and so in the ende thereof he was healed: from that time forward this hearbe began to be famous throughout *Lishebron*, where the court of the King of Portugal was at that present, and the vertue of this sayde hearbe was extolled, and the people began to name it the Ambassadors hearbe."

Nicot recounts various other cures which he effected with *Nicotiane* and how he sent the plant to the King (Francis II.) His friend Lord of Iarnac, who had also received some leaves from Nicot, "told one day at the Queenes table, yat he had caused the saide *Nicotiane* to be distilled, and the water to be dronke, mingled with water *Euphrasie*, otherwise called eyebright, to one that was shorte breathed, who was therewith healed."

Edmund Howes³ states that "Tobacco was first brought, and made known in England by Sir John Hawkins, about the yeare 1565, but not vsed by Englishmen in many yeeres after, though at this day commonly vsed by most men, and many women."

John Sparke the younger, in his account of Hawkins' second voyage (1564-65), states that Hawkins, ranging along the coast of Florida for fresh water in July, 1565, came upon the French settlement there under Laudoniere; and in his description, Sparke says: "The *Floridians* when they travell haue a kinde of herbe dried, which with a cane, and an earthen cup on the end, with fire and the dried herbs put together, do sucke thorow the cane the smoke thereof, which smoke satisfieth their hunger, and therewith they line foure or five dayes without meat or drinke, and this all the Frenchmen vsed for this purpose: yet do they holde opinion withall, that it causeth water and fleame to void from their stomacks."

According to Howes, "*Apricocks, Mellycatons, Musk-Millions and Tobacco* came into England about the 20 yeare of Queene Elizabeth" (1577), and he adds in the margin: "Sir Walter Raleigh was the first that brought tobacco into vse, when all men wondered what it meant."⁴

Howes is undoubtedly in error, as Raleigh neither introduced tobacco nor the habit of smoking it, and whatever credit may attach, belongs to Master Ralph Lane, who came to Virginia in August, 1585, and returned with his colony, numbering 103 persons, in June, 1586, with the fleet of Sir Francis Drake.

While Sir Walter introduced neither the Herb nor the manner of smoking it, Mr. Arber says, there is a general consent that he principally brought the habit of Tobacco-smoking, or as it was at first called, *Tobacco-drinking*, into fashion. His name, and his almost exclusively, became identified with the new National Habit.

James Howell, one of the most delightful writers of his time, in a Letter on Tobacco,⁵ incidentally mentions Raleigh. He writes: "But if one would try a pretty conclusion how much smoak ther is in a pound of Tobacco, the ashes will tell him; for let a pound be exactly weighed, and the ashes kept charily

³ In his continuation of J. Stow's *Annales*, p. 1038, Edition of 1631.

⁴ Mr. Edward Arber, the learned editor of English Reprints, in his notes "On the Introduction of Tobacco into England," says that the date here given (1577), so far as tobacco smoking generally is concerned, must be wrong by about ten years.

and weighed afterwards, what wants of pound weight in the ashes cannot be denied to have bin smoak, which evaporated into air; I haue bin told that Sir Walter Rawleigh won a wager of Queen Elizabeth upon this nicity."

Mr. Arber expresses astonishment that no one among the countless myriads of smokers, has ever written a History of the Tobacco Literature and of the progress of Smoking through civilized and uncivilized communities.

Of sketches there have been several. Mr. F. Tiedeman has given an excellent one of the general introduction of the plant into Europe. (Frankfort, 1852.) Mr. F. W. Fairholt, in his *History of Tobacco* (London, 1842), has given a good instalment towards a history of the subject. Dr. H. W. Cleland, in his privately printed work *On the History and Properties, Chemical and Medical, of Tobacco*, Glasgow, July, 1840, gives a list of 150 works on this subject.

Tobacco is said not to be alluded to in the *Arabian Nights*, or by Shakespeare, but it is often noticed by other English dramatists.

In 1602 appeared "*Work for Chimney-Sweepers: or A Warning for Tobacconists, Describing the pernicious use of Tobacco,*" and in 1604, King James' well known "*Counterblaste to Tobacco.*"

Sir Robert Ayton, who died in 1638, left among his MSS. the following sonnet, first published among his Poems in 1844:

ON TOBACCO.

Forsaken of all comforts but these two,
 My faggot and my pipe, I sit and muse
 On all my crosses, and almost accuse
 The Heav'ns for dealing with me as they do.
 Then Hope steps in, and with a smiling brow
 Such cheerful expectations doth infuse
 As makes me think ere long I cannot choose
 But be some grandee, whatsoe'er I'm now.
 But having spent my pipe, I then perceive
 That hopes and dreams are cousins--both deceive.
 Then mark I this conclusion in my mind,
 It's all one thing--both tend into one scope--
 To live upon Tobacco and on Hope,
 For one's but smoke, the other is but wind.

P. 53.

⁵ Familiar Letters, iii., 12, Ed. 1650.

About 1614, Joshua Sylvester wrote a poem with the following violent title: "*Tobacco battered; and the Pipes shattered (About their Ears that idely Idolize so base and barbarous a Weed; or at least-wise over-love so loathsome Vanitie:)* by A Volley of holy Shot thundered from Mount Helicon."

In 1616, John Deacon dedicated "*Tobacco tortured; or the filthy fume of Tobacco refined:*" to James I.

The well known poem sometimes called "*Tobacco Spiritualized,*" is so often misquoted and misprinted, that we give it in its original form:

The Indian Weed withered quite,
Green at Noon, cut down at Night;
Shews thy decay, all Flesh is hay:
Thus think, then drink Tobacco.

The Pipe that is so lilly-white,
Shows Thee to be a mortal Wight,
And even such gone with a touch:
Thus think, then drink Tobacco.

And when the Smoke ascends on high,
Think thou behold'st the Vanity
Of worldly stuff, gone with a puff:
Thus think, then drink Tobacco.

And when the Pipe grows foul within,
Think on the Soul defiled with Sin,
And then the Fire it doth require:
Thus think, then drink Tobacco.

The Ashes that are left behind
May serve to put thee still in mind,
That unto Dust return thou must:
Thus think, then drink Tobacco.

NEW BOOKS.

THE SCIENCE OF LAW. By Sheldon Amos, M. A., Barrister at Law, etc., etc: Author of "A Systematic View of the Science of Jurisprudence;" etc.: New York: D Appleton & Co.

This book must be pronounced serviceable, although it may be difficult to indicate precisely to what class of inquirers its services could be very valuable; and probably the conclusion on all sides

will be, that any one interested in the science of law must, as a collector, be glad to have found it, while no one can consider it adapted either to supply a want, or to improve upon its predecessors. Its fault is a pervading looseness of thought, entailing of course, and evidenced by, not only weakness, but inaccuracy of expression, which work it an injustice hardly likely to be undone by a second and careful perusal. This, however, it deserves. Professor Amos teaches a theory of law and of government recommending itself as in accord with the current notions on these subjects, and he is entitled to discuss it at some trial to our patience, and of our power of discernment in the solution of verbal difficulties; for his discussion is temperate, and its result good; but he has nothing original to advance, and, indeed, in some relations, has not all to advance which should have been gathered in the wide field of investigation before him. A peculiarity of his work is, that it gives no idea whatever of the progress of the science of law (after accounting for its origin); of its history in the concrete, so to speak; or of more than the ethical features of the generally received doctrines of the day. His chosen reader, too, can not tell what he receives from Professor Amos direct, and what comes to him with the authority of other masters;—what is only speculation, and what the conclusions of experience in the world's affairs. And yet this is what ought to be put in the power of every intelligent layman. There are no authorities cited for the guidance of the beginner, whilst, by others, so many authorities must be recognized as depended upon, without acknowledgment, as to confuse the well-informed in an attempt to credit Professor Amos with anything but some palpably bad welding, and numerous mechanical errors in the rest of his workmanship. The author tempts his critic constantly to do him injustice.

The object of the volume is to explain to the layman in plain language what constitutes Jurisprudence; but this object is suggested so awkwardly as, really, not verbally to be stated at all. The intention to reduce a science to the popular level is carefully, though still only circuitously, disclaimed; while the execution of the work precludes the possibility of its being anything but a very respectable type of an over-abused class. Popular science, as described by Professor Amos in his preface, is a good thing, although he esteems, and means to brand, it otherwise; and an examination of three of the four objects or heads of intention in the making of a book for the multitude, which, in the same place, he declares to be good, will serve to illustrate his weakness, inasmuch as they are not good at all; the first, as not to be achieved in any science above cookery; the second, as founded in a stupid slander upon "*specialists*;" the third as visionary and impracticable; and all as the com-

mon objects of charlatans in their vulgar advertisements. "The treatise or lecture," he says, "may be" (and is, in his case), "intended to do no more or less than to translate technical terms *back again into* the terms familiar in common speech; to examine *afresh* the meaning and scope of conceptions which the *persistent jargon of specialists* has clouded; to bring men of various pursuits and tastes into *intellectual contact with one another*; and by opening out to novices an *unsuspected* region of interest, to whet their curiosity and to stimulate them to further research." This, rhetorically and substantially, is in worse taste than bad taste; but it does not prepare us for such words as "enucleation," "evaluate," "evaluating," "recency"—such expressions as (the admission of general assumptions with the) "utmost parsimony." Professor Amos's carelessness in language reaches its climax in this grave reflection (he prefers "*reflexion*," page 229) upon the law of the circulation of negotiable instruments. "The peculiarity, however, is that, since each transfer of the document creates a fresh contract, all the successive contracts co-exist at the same time." (Page 223.) And his lack of mental discipline is demonstrated to the despair, it must be, of all who have a regard for him, in his classification among certain rights, indeed, among any rights at all, of "rights to be fairly spoken about and written about." When judged in little matters he fails as well. The word "law" is technical; "jurisprudence" is colloquial. Yet he uses "law" in his book designed for the populace; having put "jurisprudence" in the title of its predecessor, designed for an exacting body of scholars.

The person who takes up a work like this, and seriously proceeds to master it, is impelled by the inquiry, What *is* law? And he means—I have some experience of a system, operative for my security, which men are taught to regard as, in itself, perfect, and on which they rely without hesitation, manifested in a procedure that is irresistible. Is it based on fundamental truths, common to all legal schemes, because the divinely intended outgrowth of a theocratic code, as to both the origin and the form of which there can be no doubt? In other words, is law something which existed before man was, which is divine, and which is immutable? And if not, what are its source, sanction, province? No one among laymen would care to look through the pages of a treatise on jurisprudence if his mind was not stirred in this direction; and of course, therefore, the value of such a treatise is to be measured by the degree of its success in fulfilling the promise implied in its composition, to elucidate a problem of the highest order, recommending itself only to an intellect of superior capacity. In so grave an office it is not permitted us to forgive an indecorous haste and lack of decision; and it is, accordingly, as a censure, that we declare that but for his unpardonable fault

of a slipshod execution, Professor Amos's treatise would have been respectable. As it is, it is not worse than was Beattie's, and the secret of its safety lies in the fact that it follows, though at some distance, Austin, Paley and Locke; a fact much in its favor, and which makes it very clearly proper that it be recommended, after due notice given of its want. Our misfortune is, that most of what is accomplished in this direction is badly done. Were there five good law books in each twenty-five given us, Professor Amos would stand no chance whatever.

CURSUS DER PHILOSOPHIE ALS STRENG WISSENSCHAFTLICHER WELT-ANSCHAUUNG UND LEBENSGESTALTUNG. Von Dr. E. Dühring. 560 Seiten. Leipzig: 1875.

Dr. Dühring, *privat-docent* in the University of Berlin, is one of the most noteworthy men of this generation. He was originally educated for the bar and practised as a lawyer; but having lost his sight, in his twelfth year, he betook himself to the work of the student and the teacher. His labors as an economist have been already and often referred to in the pages of this magazine; we are proud to name him as the chief European representative of those economic principles, whose prevalence will yet add greatly to the material welfare and the mental happiness of the nations. His great *History of National Economy and Socialism* has passed to a second and much enlarged edition, and is still—in spite of Roscher's bulky and not altogether worthless volume—the only strictly scientific account of the subject. A second subject that has occupied Dr. Dühring's attention very greatly is mechanics; his *History* of the principles of that science in their gradual evolution obtained the Beneke prize from the University of Göttingen, and the judges went out of their way to express their surprise and gratification at the unexpected excellence of the work. His third favorite subject is philosophy. Besides articles and criticisms in the *Philosophische Monatshefte* (Leipzig) and two treatises, on the *Worth of Life*, and on *Natural Dialectic*, he published a *Critical History of Philosophy*, which reached a second edition in 1873. His especially thorough and brilliant account of the philosophy of Schopenhauer, and his agreement in some of the sweeping judgments which that school have pronounced upon their predecessors, led to the supposition that he was a disciple of that eccentric thinker. A little thought, however, would have shown that while orthodox Political Economy would chime in very well with pessimism, Dr. Dühring could never with logical consistency unite that philosophy with his economic views. As we expected, his systematic exposition of his own opinions, given us this year in his *Cursus der Philosophie*, shows him to be any thing but a pessimist. He is quite ready to agree

with Schopenhauer in vigorous and sweeping censure of the Professorial philosophy of Germany, but not so ready to give up the universe that they have tried to formulate as the worst of all possible worlds.

To Dühring "Philosophy is the highest form of the consciousness of the world and of life." It deals with actualities and brings to bear upon them all the light that the various sub-departments of knowledge can contribute. It advances with the scientific advance of the race, and its progressive emancipation from prejudices and tyrannies. It embodies its advance in higher ideals of manhood, purer morals, juster laws, wiser social methods.

While there is much in the book that seems to us doubtful, or over-hasty in its rejection of what has been received as true, we welcome it as the honest, frank and thoughtful contribution of a vigorous thinker, to the solution of the great problems of the universe and of human life.

THE ABBÉ TIGRANE: Candidate for the Papal Chair. From the French of Ferdinand Fabre. Translated by Rev. Leonard Woolsey Bacon. 12mo. Cloth. Pp. 272. Price, \$1.50. New York: J. B. Ford & Co. [J. B. Lippincott.]

This is a remarkable book, from several points of view, and we may truly say that it is one of the best of this season's publications.

The translation from the French seems to us most excellent; the English is pure and free from most of those faults which are so apt to characterize this kind of work, and, though we have not seen the book in the original, there is that about the translation which creates a conviction that it preserves the style of the author, and gives us in English exactly what he meant to tell us in his own tongue.

The great majority of novel-readers are without doubt women, and as every novel-writer knows this fact, it follows almost of necessity that by far the larger number of novels are written for women. Now there is no question about this further fact, let them deny or not, that a great part of the thought of woman-kind run upon, are wasted upon, if you please, *man-kind*; so that it was a very bold and entirely original experiment for Mr. Thackeray to try, when he called his "Vanity Fair," a "Novel without a Hero." Our present author, with less originality perhaps, but with even more boldness, has written a novel without a love-story, or a trace of one; and this alone entitles the book to be spoken of as remarkable.

Again, if we are to believe the newspaper items which have appeared from time to time, there has been quite an excitement created in Paris by the publication of this novel, because the characters are thought to point directly to certain eminent dignitaries

of the Roman Church in France; we regret on our own account, as well as our readers, our inability to indicate whom these suspicions touch. Can it be that by Capdepont—the Abbé Tigrane—is meant Mons. Dupanloup? It is certain that the latter was, as the former is represented to have been, one of the most prominent and powerful supporters at the last Council of the new dogma of Papal Infallibility.

The prominent personages are few in number, and the plot itself, while exposing a very complicated system of plotting and counter-plotting, is simple and free from sensationalism. Capdepont, who gets his soubriquet of Tigrane while a student at the Theological Seminary, is born of humble parentage in a village of the French Pyrenees, and the ambition which is the overshadowing feature of his character first takes form when he reads how one of the early Popes was in his youth a swineherd; an occupation not unfamiliar to our hero in his own boyish days. He rightly judges the first step in his upward career to be a bishopric, and bends all his energies to obtaining a nomination from Paris. His greatest obstacle is in the person who occupies the next most prominent position in the story, Mons. Roquebrun, Bishop of the See of Lormierers, where the scene is mostly laid. This man has incurred Capdepont's deadly hatred by once defeating him in his aspirations; and as he utterly refuses to be won over by kindness to love and obey his Bishop, the latter, appreciating the dangerous ferocity of the man's character, and knowing the desires of his heart, determines to crush him; and the efforts of each to obtain the greatest influence, both over the clergy of the See and also over the authorities at Paris and Rome, lasting, if we may be allowed the seeming bull, even after Bishop Roquebrun's death, give opportunity for the introduction of several very dramatic scenes.

This is, indeed, the strong point of the book,—its intense *dramatism*; and we cannot remember any recent novel in which the dramatic interest is so vivid or so well sustained: reading it is "as good as a play," and there are not many readers who will readily lay it down unfinished, after having once begun its perusal.

THE BETTER SELF: Essays for Home Life. By J. Hain Friswell, author of "The Gentle Life." Philadelphia: Porter & Coates.

"The writer is the sower who goes forth to sow seed; his words may do good, or they may fail. In nineteen cases out of twenty they do fail; but if he succeeds in planting only one or two sound thoughts, then he does God service, and to do that is to do good service." P. 201.

Good service, we are sure these essays will do. They are writ-

ten in an easy and flowing style, often very careless, but always readable. Mr. Friswell deals with the culture of the virtues of daily life, which are more to be desired than those of more dazzling quality. The radical meaning of virtue is strength; its Latin acceptance, courage; and the starting point of our modern idea of the word is still the ancient strength and courage. And these are the elements of all virtue, though John Ruskin complains that people are "always talking of courage and perseverance and fortitude, but patience is the finest and worthiest part of the fortitude, and the rarest, too." This better self is developed in a life of small things: "of ordinary courtesy, simple and pure affection, and humdrum honesty." Such a life Thackeray gives us in *Esmond*, which Charles Kingsley interprets as that of a man superior to his own age only in being true to himself, to honor, duty and virtue. In him there is only the wisdom of simplicity and honesty, and yet through these Thackeray shows to every man greater possibilities in his own life, and rouses him to a knowledge of something higher in life than that which appeals to his "self-love and arithmetical understanding," and gives him a better rule than that of *quid pro quo*.

There are many beauties in the book, and Mr. Friswell will, doubtless, find it fulfill the modest aim with which he wrote it in sickness and ill-health.

ALICE DUNBAR: A Story of the Times of John Knox. By Lucy Spottswood. Philadelphia: Presbyterian Board of Publication, 1334 Chestnut Street.

This is the diary of an orphan girl who lived for a long time in the house of Master Knox, and who gave up and underwent more than was usual even in those stormy times. The authoress has thrown herself into the spirit of the period and the quaint style of the Reformers most admirably. Alice Dunbar notes her trials and also her resignation to them with charming simplicity, and constantly refers, with the submission of a godly lassie, to counsel given her by Master Knox and her brother Hugh. The unities of time, manner and expression are nicely observed. We wish more of the books published for Sunday-school scholars combined as this one does, with lessons of faith and patience, a few lessons of history. The sketches of Knox, Mary and Earl Murray are very spirited, and would make an impression on youthful readers not soon to be forgotten. And intellectually considered, and morally, too—so far as the purposes of instruction are concerned—it is better that one should have a distinct picture of historical characters in his mind, even though a false one, than that he should have none at all. For whether the dead be slandered or flattered, the living has on his mind an outline generally true and an example to be admired or detested. So, for

the welfare of the general public, it makes little or no difference whether Alfred actually baked his own cakes, or Nero played to the burning of Rome, or Mary was an accomplice in the assassination of Darnley, or Charles took part personally in the massacre of St. Bartholomew. These stories keep the characters fresh, and they are true so far as they depict respectively the simplicity, the cruelty, or the treachery of their subjects. If untrue, it is what the lawyers call *damnum absque injuria*, because the characters themselves cannot complain; and they either have no descendants, or else their line values them for their respectable antiquity without regard to their personal merits. But this is not true in the case of living men or principles; and we wish that the authoress, who is well qualified to do it, had spent a few pages in showing her young readers enough of the temper of the times to prevent their cherishing the least hatred against and distrust of the Catholics whom they must constantly meet and deal with in after life.

FUNGI: Their Nature and Uses. By M. C. Cooke, M. A., LL. D. Edited by the Rev. M. J. Berkeley, M. A., F. L. S. Appleton and Company. 1875.

This volume of the International Scientific Series will, from the nature of its subject, find a narrower circle of readers than perhaps any of the others. It is intended for students, and recommends itself not so much to those interested in general science, as to those who are working in a limited and as yet but partially explored region. To such as have already a knowledge of the subject and its literature, the names of the author and the editor will indicate the excellent character of the book. Those who have not made the remarkable organisms of which it treats the subjects of special study, will read with greatest interest those portions devoted to Mildew and Rust, Ergot, dear to the medical mind, and those dainty growths without which the cookery of our day could scarcely be one of the fine arts, mushrooms and truffles.

In conclusion we may with the author "urge upon all those who have followed us thus far to adopt this branch of botany as their specialty. Hitherto it has been very much neglected, and a wide field is open for investigation and research. The life-history of the majority of species has still to be read, and the prospects of new discoveries for the industrious and persevering student are great. All who have as yet devoted themselves with assiduity, have been in this manner rewarded. The objects are easily obtainable, and there is a constantly increasing infatuation in the study. Where so much is unknown, not a few difficulties have to be encountered, and here the race is not to the swift so

much as to the untiring. May our efforts to supply this introduction to the study receive their most welcome reward in an accession to the number of the students and investigators of the nature, uses and influences of fungi."

A QUESTION OF HONOR. A Novel. By Christian Reid. 12mo. Pp. 501. Price \$1.75. New York: D. Appleton & Co. 1875.

Fiction is the recognized teacher of to-day, but it is to be regretted that the beautiful stories of history are left buried under a weight of statistics and detail which repels all but the earnest student. Probably to but few young people the names of Penelope, Cornelia, Jane Grey, and Bayard suggest the constancy, nobility of mind, sweet submission and stainless honor which they represent to those who have "browsed in the fair fields" of history. And the story of lives that have been lived, of men and women even as we are, has a power that fiction attains only in the hands of a Supreme Master.

Since the wisdom of life is to be found in its commonplaces, a fiction deserves a favorable notice which shows, as this one does, the beauty and force of justice, integrity, truth and self-denial. And this is shown in the lives of a southern family to whom honor was dearer than profit, and among whom the question arises as to the disposition of an inheritance left in trust under peculiar conditions. The style is good, and the story natural in its rendering, if not always so in its incidents.

THE YOUNG MAGDALEN AND OTHER POEMS. T. B. Peterson & Brothers, Philadelphia.

Those who are blind enough to accept as an article of faith the tradition that a poet is born and not made, had better read "The Young Magdalen and Other Poems," by Francis S. Smith, author of "Maggie, the Charity Child," "Bertha, the Sewing Machine Girl," etc., to see how great an error they have fallen into. They will then discover, a good deal to their surprise, that the poetic art has fallen considerably below the level of ordinary knack in arranging a few cheap sentiments in such a way that their last words jingle. Even to this, the least claim, one would think, that the merest verse-maker could pretend to, the author has not made his title good. Long after the patience of the weary reader has given out there still remains enough sensibility to feel the shock of his attempts at rhyming, and partly as the result of such grammar as a boy on the lowest form ought to be whipped for, and the parade of such mawkish sentiment as the same boy would be ashamed of, the book is thrown down in entire confidence that if any one

ever reads as much of it as we have, it will be for the same reason that Mr. Slurk read the *Eatonville Gazette*, "because the fellow's audacity amused him."

"THE PICTORIAL TOWER OF LONDON." With full and complete index. By William Harrison Ainsworth. Illustrated by George Cruikshank. Cloth. \$2.50. T. B. Peterson & Bro. Philadelphia.

Any man, who like the author, according to his preface, has "for years cherished the wish of making the Tower of London the *ground-work of a Romance*," could hardly be expected to produce a book of much interest, except for those who are ignorant of its real history. For such it is evidently intended, and "with ninety-three large illustrative engravings" of the most sensational kind, executed in the worst possible style, can hardly fail to supply a want the author is satisfied exists. One would think that little "*romance*" could be added to the history of the Tower. Within its walls more has happened to attract the attention and either enlist or excite the feelings of men than anywhere else in all the world, and although it is no longer the palace, the prison or the fortress that it was at the time the author has selected to write his "*romance*," it is still too great a subject for the mere book-maker to practice on. Nor can any good come of the attempt. There are enough histories already of the *romantic* kind piled up in the way of conscientious and truthful writers, to warn men who really are bent upon increasing the common stock of knowledge never to mix up facts with imaginary situations, or to put preposterous dialogues in the mouths of those who must at least be supposed to have had ordinary brains.

NATIONAL SELF-PROTECTION. By Joseph Wharton. [Reprinted, by permission, from the *Atlantic Monthly*.] Pp. 37. 8vo. Philadelphia: The American Iron and Steel Association,

We had almost concluded that the present quarrel over the currency had, for the time, so absorbed the attention of the American people that it was hardly worth while to take up any other of our great economic questions. But when the *Atlantic Monthly* finds it worth while to ask two of our leading economists, one on each side, to state the case of Free Trade and Protection respectively, it shows that, in the opinion of competent judges, the popular interest in that question, however obscured for a time, is permanent and vital. We cannot congratulate the Free Traders either on their spokesman or on the tone of his production. Men whose public utterances have once committed them to one side of the case, need more "restraining grace" than has been bestowed on Mr. David A. Wells, to enable them to

bear with good temper the very natural retorts that they are likely to meet with when they take up the other. A sour temper, a crabbed style and a flavor of spite, lingers about most such converts all their days.

Of course Mr. Wharton's essay has no direct reference to the other, being written and in type before that of Mr. Wells was published. It is even better and more effective, as a statement of the case, than his paper on "International Industrial Competition," read some years ago before the American Social Science Association. It deals more with specific details, many of them fresh and new in this connection, and it explodes more of what Cullen calls "false facts," while the great leading idea of national industry, in its relation to national life and perpetuity, is kept before the reader's mind. It has plenty of humor, such as the parody on Æschylus, on page 25, but the fun is but the lambent play of the electricity that hits home in the logic. We can conceive of no better statement of the whole case for practical men of public spirit than is given in this and the other essay of Mr. Wharton.

ON THE HEIGHTS. A Novel. By Berthold Auerbach. Translated by Simon Adler Sterne. Library Edition. 12mo. Pp. 624. New York: Henry Holt & Co.

Of all the literary productions of this talented Jewish author, his *On the Heights* is easily the first. *Villa Eden* is more pretentious and elaborate, and was read in Germany because it was supposed to present the American philosophy of life, and in America because it was supposed to depict that of Germany; but it lacks unity and vitality. The *Black Forest Village Stories*, which made Auerbach's reputation at the start, are admirably clever and natural pictures of life in a South German village, but they do not aim at very high artistic excellence. But in *On the Heights* there is at once a large and exacting plan, and a worthy execution of it. It is a wonderful double poem, running on in two currents of narrative, which now meet and blend, now separate widely. The simple life of the village on the mountains, and the elaborate and formal life of the royal court, and the same human nature in the actors and the spectators of both! Finely conceived also are the characters in both groups—Walpurgis and her husband and the village inn-keeper on the one side, and the King, the Queen, the Countess Ida on the other. Nowhere else in modern German fiction have we a book that comes so near to the novels of Goethe in their union of artistic simplicity with deep meaning. German critics have warmly recognized the significance of the book, and it has already been made the subject of careful exposition.

The philosophy that is scattered through the book is not much to our taste. The author's admiration of Spinoza, whose works he has translated into German, is disclosed in the pantheistic sentimentality and the proud stoicism which he ascribes to his favorite characters. But, as in Spinoza, ethical principle is not lost sight of, however inconsistent with the metaphysical creed. In both the long discipline of the Jew bears the same fruit in the conviction that the line between right and wrong is the deepest and most awful of divisions. In Auerbach, the Jewish faith that that line is especially connected with human relationships and the discharge of relative duties, is very marked, and forms the moral turning-point of the story. The unlawful passion of the King and the Countess, a passion that has found no vent save in the single kiss he imprints on her forehead, is the occasion of the most intense suffering on her side, and of her flight from the conventional life of the court to the simple home of her friend Walpurgis. In both, the power and the victory of the better and higher self are exemplified, and the principle so well laid down by Mr. Greeley, that "the affections are the flower and the consummation of the will," is admirably kept in sight by one to whom the notion of a free will must (in theory) be a bad dream. The contrast of the conception of love in this book and that given by George Eliot in *The Mill on the Floss*, is very marked, and anything but creditable to the English lady.

Mr. Sterne has done his work, as a translator, most admirably; the book reads as easily and as clearly as if the author had written it in English.

BOOKS RECEIVED.

Statement of Reasons for Embracing the Doctrines and Disclosures of Emanuel Swedenborg. By the Rev. Geo. Bush, with a biographical sketch of the author. New York: E. Hazzard Swinney. 1875.

Norse Mythology; or the Religion of our Forefathers. All the Myths of the Eddas carefully systematized and interpreted, with an Introduction, Vocabulary and Index. By R. B. Anderson, Prof. of Scandinavian Languages. Crown 8vo., Cloth, pp. 473. \$2.50. Chicago: S. C. Griggs & Co. 1875. [Claxton, Remsen & Haffelfinger.]

Two Thousand Years After; or a Talk in a Cemetery. By John Darby. 12mo., pp. 106. Cloth, \$1.00. Claxton, Remsen & Haffelfinger: Philadelphia.

A Light and a Dark Christmas. A novel. By Mrs. Henry Wood. Paper cover, 25 cents. T. B. Peterson & Bro., 306 Chestnut St., Philadelphia.

Aristophanes' Apology: including a transcript from Euripides, being the last adventure of Balaustion. By Robert Browning. 12mo., pp. 324. \$2.00. Boston: Jas. R. Osgood & Co. [Porter & Coates.]

Jonah, the Self-willed Prophet. A Practical Exposition of the Book of

Jonah. By Stewart Mitchell. 12mo., cloth, pp. 247. \$1.50. Claxton, Remsen & Haffelinger, Philadelphia, 1875.

Alice Dunbar. A story of the times of John Knox. By Lucy Spottswood. Small 16mo., pp. 154. Price 60 cents. Presbyterian Board of Publication: 1334 Chestnut Street, Philadelphia.

History of the Presbyterian Church in the United States of America. By the Rev. E. H. Gillett, D. D. Revised edition. 2 vols., 400 pp. each, \$5.00. Presbyterian Board of Publication: 1334 Chestnut Street, Philadelphia.

THE
PENN MONTHLY.

NOVEMBER, 1875.

THE MONTH.

THE loss of the Vanguard and the sinking of the yacht Mistletoe, have aroused intense excitement in the English public mind on a subject upon which it is always extremely sensitive. Englishmen have long ago become reconciled to the conclusion that while their skeleton of an army with the volunteers would be quite strong enough to protect their island from attack, the time has gone by for English military power to exert a controlling influence in European politics; but they cling naturally with all the greater pride to their naval and commercial supremacy. If seamanship, they say, be not an English virtue, where can one be found? And when, therefore, two accidents happen, by which first a yacht, and secondly one of the famous vessels in the navy, are run into in the day-time and sunk, there is no limit to the excitement which follows. A coroner's jury has pronounced the opinion, timidly to be sure, but distinctly, that the loss of the Mistletoe was due to the fact that the Queen's steam yacht was running through a crowded channel at too fast a speed, and throws the blame where it seems to belong, on the officers of the Alberta. But it is said that Her Majesty, who witnessed the affair, has vigorously espoused the cause of her young German cousin, who commands her yacht, and resented with warmth the judgment of the jury. In the case of the Vanguard the captain, Dawkins, has been dismissed from his command, but the investigation is to continue. The cause of

this accident, too, seems to have been the speed with which the fleet was sailing up the channel. A fog suddenly arose—at almost the same instant a vessel was observed ahead—the Vanguard was ported to avoid her, when the Iron Duke, which was also under full steam and following at but three cable lengths behind, came crashing into her side. The accident occurred exactly ten minutes after the fog arose. The loss of the Vanguard is likely to lead to important results. Invulnerable as she was to all but the heaviest projectiles, her side was crushed as if it had been an egg-shell by the Iron Duke's ram. The limit of resistance in armor-plated ships, it is said, has perhaps been reached, but the piercing power of projectiles may be indefinitely extended. The most eminent authority on the subject in England calls attention to the fact that the "energy" of a 600-pound shot from a 25-ton gun, when it leaves the muzzle, is a little over 6,000 foot-tons, and would riddle a vessel like the Vanguard or the Iron Duke through its thickest armor, while that of a 35-ton gun can pierce 16 inches of armor at 200 yards. Guns of 50 tons are being made which will require 20 inches of armor strongly backed to exclude their fire, while the "energy" of a ram which weighs 1,000 tons less than the Iron Duke, is measured by about 22,300 foot-tons. A ship, therefore, which might be impervious to cannon balls, would be destroyed by a single blow of an ordinary ram. The armor, too, being placed above the water-line, requires the hull to be greatly lightened in order to support it, but the ram and the torpedo attack beneath the water. These considerations are being urged with great force, and authorities like Admiral Goldsborough and other Americans are quoted in support of them. Experience will no doubt compel naval powers, hereafter, to depend chiefly on swift rams and skillful maneuvering. A naval battle will then be decided in favor of that ship which shall succeed in striking effectively the first blow.

A MOMENTARY sensation which promised trouble, has passed over peacefully in France, but the excitement which it occasioned shows the general feeling of anxiety and perhaps distrust of the stability of the present government. The letter of Admiral de la Roncière le Noury was a rather indiscreet and frank expression of his mind. Few men ought to blame the Admiral for "repudiating

the doctrine of the revolutionists of the 4th of September"—that is to say, the theory that one government can be overturned, and another set up, by the impulses of a mob—but none can blame MacMahon for depriving of the highest naval command an officer who declares that he will obey the existing government during his pleasure. Discipline even more than political necessity demanded the Admiral's dismissal, and perhaps the Marshal-President was glad of the opportunity of showing his anti-Bonapartist tendencies, even at the sacrifice of the most able and accomplished naval officer in France. An amusing anecdote is told of the affair. When the Admiral's letter was published an eminent politician hurried to MacMahon. "Your government will be ruined," he cried, "if you do not rid it at once of all these Bonapartist sympathizers." "Ah," was the reply, "the person who went out as you came in said exactly the same thing about you."

THE Papal Nuncio recently presented a characteristic note to the government of Spain, insisting upon the fulfillment of the Concordat, which forbids the exercise of any non-Catholic creed, requires the transfer of the superintendence over education to the clergy and the co-operation of the secular power in suppressing heretical teaching and literature. Were it not for the recent events in Montreal, where the same spirit has made itself manifest, one would hardly imagine that this claim was gravely preferred in the latter part of the 19th century, even in Spain. The Ministry replied in conciliatory language and endeavored to persuade the Nuncio, Cardinal Simeoni, that "the circumstances of the case no longer permitted him to put forward his demands." It expressed its determination to be moderate but firm, to respect religion, but also to protect the rights of the State, and to make no concession of its independence in dealing with the Bishops. The tone of the Nuncio's communication led to the inference that in the event of such an answer as this, the influence of the Vatican would be openly transferred to Don Carlos, and everything done to postpone the establishment of peace. The result very naturally followed that both Liberals and Conservatives for a time seemed to become reconciled, and it was rumored that Castelar himself had moderated his opinions, and would enter the next Cortes a supporter of the Liberal monarchy. The surprise of all men was

therefore great when the protesting Nuncio was suddenly recalled, and Monsignor Rapella, a much more liberal person, put in his place. It would seem that even Cardinal Antonelli can be convinced that with such a struggle on his hands as is now going on in Germany, it would be wise, if not to conciliate, at least not to offend, so long-suffering and obedient a vassal as Spain.

THE retirement of Mr. Secretary Delano has been so long anticipated that it has given rise to almost as little comment as regret. It seems that he tried to go last fall, and gave in his resignation in June; but as soon as he had become generally unpopular and his retirement a necessity for the party and the administration, the President, with characteristic appreciation of the situation, insisted that he should remain. He retires at last when too late to benefit either, with the usual certificate of good moral character. His successor has not yet been named, and the public mind is in the ordinary condition of doubt which now naturally precedes one of General Grant's cabinet appointments. Several gentlemen about whose initials there is no certainty, have been mentioned by rumor, but the appointee in this case, as in most of the others, will probably be a person whom no one but the President would have thought of, and of whom he alone knows anything; so we must possess our souls in patience and be content to wait.

IF we were at a loss for proof of the benefits of kindness and forbearance and the evils of cruelty and intolerance, we would find it easily this month in two Southern States. The disturbance which has broken out in Mississippi, although arising from the personal quarrels of a black sheriff of the county, and a white Senator of the United States—neither of whom, it is said, considers the other a "gentleman"—and confined to the locality in which it broke out, is quite important enough to have called forth, in the days of the late Attorney General, innumerable telegrams and even a proclamation from the President. Constant quarrels, and the determination on the part of the Northern whites, whose political power depends on it, to keep the negroes in a state of irritation—in which by the way they have too often been helped by the narrow and intolerant spirit of many of the Southern whites—have made Mississippi the scene of most disgraceful deeds. This last

is less so than those which have preceded it. Time alone can destroy prejudices, but experience ought by this time to have taught its bitter lessons in Mississippi. In Georgia, on the other hand, we have seen an equally instructive spectacle of a very different kind. The relations between the negroes and their former masters have not been unmarked by a mutual confidence, and the influence of unscrupulous white adventurers has been less there than in most Southern States. The recent conspiracy of a few ignorant and worthless negroes was promptly suppressed without bloodshed, in a manner creditable to both races of citizens, as well as to the attorneys and the just judge who tried the causes which grew out of it, and we have seen as a sequel to it a convention of blacks in which common sense and wisdom had a foremost place. A resolution approving the impartial conduct of Judge Johnson in the recent trials was unanimously adopted, and a very sensible discussion on the subject of emigration to Africa decided in the negative; the sentiment of the convention inclining by a very large majority to the more conservative course of advising the negroes to stay at home, and by industry and obedience to the laws to build up a sound and prosperous commonwealth for white men and black alike.

No one who has any acquaintance with the laboring classes in this country can fail to feel great sympathy with them in their situation at the approach of this winter. The prolonged depression of business is daily depriving thousands of work, to whom want of work means suffering and starvation. There has not been a period for a long time in this country when the prospects of the employee were worse, or the employer less able to help him. The most active industries are at a stand-still, and the business outlook growing daily more gloomy than before. Such a situation, distressing in itself, is rendered dangerous by the opportunity which it gives to the demagogues which swarm under a government like ours. Nothing is more needed for the moment than mutual forbearance and mutual confidence on the part of labor and capital. If they are said to depend entirely upon each other in prosperous times, it is even more difficult to separate their interests in "hard," and it is vitally necessary for the workingman who cannot easily pass from one occupation to another, and to whom work is

bread, to appreciate this. The politician who builds upon his ignorance, and makes capital out of his sufferings, will leave no stone unturned to stimulate dissensions and cause trouble, and on the workingman's good sense in understanding and directing this his happiness depends. The strike at Fall River has failed because the manufacturers were unable to yield to its demands. They could not have continued at old rates, and to have forced them to do so would have been the slaughter by the strikers of the goose that laid the precious egg for them. The question which the employers had to decide was, "Shall we reduce wages or stop?" and the eagerness with which work was resumed showed that it has been decided best for all parties. A prolonged strike could hardly have driven the manufacturers a step, for they stand against the wall; and it would have caused infinite suffering to the operatives themselves, however much it might have helped to adorn the periods of the orator, or promote the selfish ambition of the politician. When, therefore, so shrewd and experienced an observer of events as the Honorable Benjamin F. Butler says that the announcement that the operatives had yielded and returned to work is "the saddest thing that ever has come to his eye," it may be presumed that he refers to that one which he keeps upon his own political advancement, rather than to the other with which, no doubt, he is always looking at the public good.

As this goes to the press the sharpest State campaign since 1862 is drawing to an end. Before it passes into the hands of the *PENN MONTHLY* subscribers, they will have become familiar with the result. And even if it were ever possible to prophesy concerning such things, it would be useless to attempt to do so here. A word, however, may be said about the canvass. The timidity of the Republican leaders kept the main question back for the first few weeks of the campaign. But at last, when the school question had been talked into staleness, the courage of a few men like Gen. Woodford, of New York, forced the leaders up to the ground occupied by a strong majority of the party, and drew there many of the best speakers in the country, as well as the attention of all men. One by one the Independent Republicans—even Liberals like Grosvenor of St. Louis, and newspapers as outspoken as

Murat Halstead's—took up the cudgels against the Columbus platform. Carl Schurz, arriving from Europe in the middle of September, was summoned by telegraph, and for the past fortnight we have witnessed one of the ablest campaigns of argument of which a State has ever been the scene. Of the many very able speeches which have been made, Mr. Schurz's opening address to the merchants and business men of Cincinnati was undoubtedly the most remarkable. Had it contained less intrinsic worth, his peculiar position with reference to the two great parties, and his national reputation, would have secured attention to it. But the speech itself would have made a reputation for any one. Addressing himself adroitly to the Democrats, and showing them how completely they have fallen away from the truth and turned to worshipping false idols, he proceeded to attack their present position on the money question, and to show the absurdity of the arguments which are used to mislead them. As a contribution to the political literature of what promises to be the great question of the next presidential campaign, and (as has been said) as a popular exposition of a difficult subject, Mr. Schurz's speech is remarkable. But, after all, what one may most admire in it is its independence and loftiness of tone. In these days of non-committal, fence-striding statesmen, it is most refreshing to read such a speech as this, and to know that there is one man at least with a national reputation who prefers honor to office, and principle to party. With such a spectacle before men's eyes as Hendricks and Thurman present on the Democratic side, and men like Morton on the other, the lofty tone of Schurz is a wholesome and much needed stimulus. Indeed, it is instructive to review the political history of the past few years, and see how many changes have taken place—and how soon the whirligig of Time has brought in his revenges. Three years ago this autumn Horace Greeley was running for the Presidency. Sumner had been reprimanded by Massachusetts; Carl Schurz read out of the party; Charles Francis Adams pronounced a renegade: Logan, Conkling and Morgan ruled with a rod of iron an obsequious Senate. The Republicans were about to place a governor at Albany, and had carried Pennsylvania by nearly forty thousand majority. The President, absolute master of all the branches of the government, as he sat down a second time in the chief ruler's seat, overlooked a

country in which his party had carried three-fourths of all the States by a majority larger than had ever been known before. At no time in the history of the government had a party seemed so strong: never were leaders more intolerant. To-day how different the spectacle! The elections have gone against it in a dozen States. Sumner is dead, amid the repentant eulogies of Massachusetts, in whose gubernatorial chair sits a Democrat; and the failure of the Republican Convention to nominate Charles Francis Adams is commented upon by Republican newspapers as a blunder which will cost the party the election. The fate of Pennsylvania hangs on the hazard of another State; and not even the enforced absence of Conkling from the convention, and the snubbing of the Custom House, coupled with the nomination of a Liberal Republican on its ticket, give the leaders hope of regaining their lost hold upon New York. A party, justly distrusted, and with a record which no other organization but its own could have survived, has been suffered by the people to return to power as the lesser of two evils, and in the most momentous political struggle since the war, with State after State slipping from its grasp, and the Presidency almost beyond its reach, the Republican party calls in its extremity, not on Morton, nor on Logan, nor on Conkling—but on Schurz!

In Ohio, indeed, it is entitled to all that he or any other man can do for it. With an excellent nominee for governor, upon an honest, outspoken platform, it is defending the national honor. All other questions sink into insignificance before that. The school question is not yet a national one, and it may well be doubted if the Catholic church will be rash enough to renew her claim to the control of the "Great West," of which Ohio herself was the battle ground more than a century ago. When that danger comes it will be time to meet it. But with this other we are face to face. It is the entering of the wedge. The defeat of Hayes, followed by the success of the Erie platform in Pennsylvania, will drive it in far enough to wound, if not to split:—the defeat of Allen will break the point off short. In the latter case we shall have escaped a peril infinite in its consequences for evil; in the former, there will be hard work for every man to do.

THE campaign in Pennsylvania is absolutely at a standstill.

Strange as it may seem, it is considered by both sides to depend so much on the result in Ohio, that as if by mutual consent there is a sort of armistice until after the evening of the 12th. Had the Lancaster Convention placed itself fairly upon the hard-money side of the fence, this would not have been the case; but unfortunately it did not do so. And up to the present moment the most prominent speakers on the Republican side have handled the financial question in so gingerly a manner as to lead many independent minds to the conclusion that had the Democrats adhered at Erie to their party principles and traditions, and declared in favor of "hard money," the exponents of the Lancaster platform would have argued to the people that theirs called for "paper;" and it even gives rise to the fear that, perhaps, if Ohio goes Democratic, they will do so still. In fact, with the exception of two gentlemen lately known as Liberals, and who have rejoined their old party and made hard-money speeches in Philadelphia, no prominent speaker has boldly taken that ground, and little confidence can be placed in the convictions of a party which waits to hear how the people have voted in a neighboring State before it commits itself on a question like this of coin or paper. There is evident reason to apprehend that the cry for more greenbacks is very popular in some parts of Pennsylvania. In Allegheny county, so long a Republican stronghold, the people are said to be unanimous in favor of inflation, and in other parts of the State that policy (if policy it can be called) finds many individuals in the condition of the gambler, who, having lost all thus far, insists on having more "chips" and continuing the game. If all these things be true, a hard-money declaration and hard-money speeches would cause the party to lose votes in Pennsylvania; but the time was when success was not the only thing prized by the Republican party. In the short-sighted management of unworthy leaders, it has thrown away many advantages and sacrificed more than one noble opportunity. It sees to-day the chance of becoming the party of administrative reform, snatched from it by an enemy no sincerer than itself; but now, through the mistakes of that same antagonist in its undue eagerness for power, a great opportunity has arisen, as if Providence, mindful of the glorious work the party of the Union once achieved for liberty and humanity, had given it one more opportunity for redemption. An honest, manly

course may perhaps save it as a party, and enable it again to benefit the country; the result may be defeat, but it will not be dishonor.

But if all is quiet in the State, there is noise in Philadelphia. The Committee of 62 of the Union League has followed up its action to which we alluded some months ago, and refused to endorse the nominees for office on the county ticket. No other course, under all the circumstances, was left open for men of self-respect; and though the Committee delayed, it did not hesitate. The result has been, as was foreseen, intense excitement and indignation among the candidates' friends. The Union League has got so much in the habit of formally endorsing everything done by the party managers in Philadelphia, without regard to any other considerations, that such independence on the part of its Committee has taken the breath away from many an aspiring bosom, and caused more than one official heart to swell with anger. Newspapers, ordinarily placid, have sparkled with rage and advertisements, and more than one has been literally "awakened" with astonishment. The League is to be convened about it, because this time it is the League's ox that has been gored; the instances on record in which the institution has countenanced such things applying invariably to others' oxen. Long before this reaches the reader's eye, the question whether or not the Union League of Philadelphia contains a majority of those who sympathize with the corrupt politicians who have so long disgraced our municipal government and abused the people's patience, will have been decided. The politicians, who have their all at stake, will strain every nerve to secure a majority against the Committee. They may succeed, and the League remain the memory of a moral force in politics; but effect is certain to follow cause—and the end of abuses is at hand. That famous band of brothers (who were wont once to assemble only for "social" purposes), which has furnished so many servants to the State, is rapidly dissolving away—men no longer "mysterious" even deny that they are "pilgrims;"—the very citadel of power is shaken; "the Thanes fly from it," and there is no need of witches to foretell the host that some day soon will march from "Birnam-wood to Dunsinane."

EDUCATIONAL REFORMS AND REFORMERS.—IV.

 SELF-EDUCATION THROUGH THE NATURAL SCIENCES, BY JOSIAH
 HOLBROOK.

COMMUNITIES as well as "nations are slow and reluctant learners." Nothing is found more difficult than the introduction of educational ideas, regarded as new because unknown to the majority. To convince even a small minority that there are more attractive and effective modes of teaching children than usually practised in schools, requires a leader who not only sees the need of a change, but becomes wholly engrossed in endeavoring to bring others to a like conviction of its necessity.

In some instances, during the life-time of the leader, there is encouragement given him, which promises success for the ideas and plans he has presented. Should others survive, capable of carrying on the work, it may be prolonged; but if there be a lack of the requisite faith, energy and perseverance that brought it into notice, there is but little hope of its continuance.

My attention being drawn more than thirty years ago to the "Educational Tools" advertised by Josiah Holbrook, a set was procured for my children. With these, several copies of the Self-Instructor were received, showing the advantages of an elementary instruction in the Natural Sciences as the most attractive and effective mode of inducing children to take interest in their own education. The aid afforded by their use led to their preservation, and is the inducement to give a fragmentary sketch of the labors of Mr. Holbrook.

The title page of a pamphlet used as a Circular gives the plan pursued: "*The Self-Instructor and Scientific Apparatus, for Families and Schools: an Introduction and Aid to Books.*" The Apparatus is thus described: A set embraces—

For Geography, a globe, map of the world, and of the United States.

For Geology and Mineralogy, there is a Cabinet of fifty labeled specimens, showing the elements, structure and strata of mountains and the earth, with several of the most useful metals.

For Geometry, there are diagrams and solids, with an Album or book of combinations, showing the figures, names, properties and uses of this simple practical science, fitted more than anything else to employ young hands, and interest young minds.

For Arithmetic, there is a numeral frame, with movable balls or counters to illustrate practically addition, subtraction, multiplication, division, numeration and the squares and roots of numbers.

Illustrations by all the above articles are presented directly to the eye and memory, and of course ought to precede the abstractions of numbers and the arbitrary signs of knowledge in books, words and letters.

For the whole, is an accompanying Manual of explanations and questions, to render their various uses plain, simple and interesting, not only to parents and teachers, but to pupils of all ages.

Mr. Holbrook also enlarges on the importance of Drawing as an elementary exercise. The Motto he gives for Parents and Teachers is "Nature before books, drawing before writing." Drawing speaks a universal language, understood by all nations and tongues. It is applied to numerous subjects, both of nature and art, representing plants, shells, insects, fishes, birds, quadrupeds, houses, bridges, machinery, landscapes, and many other things. For many reasons, it ought to precede writing in a course of early instruction for children. Horace Mann says in a report of his visits to schools in Europe, "Such excellent hand writing as I saw in the Prussian schools, I never saw before. In Great Britain, France, or in our own country, I have never seen schools worthy to be compared with theirs in this respect. This excellence must be attributed to the universal practice of learning to draw contemporaneously with learning to write. I believe a child will learn both to draw and to write sooner and with more ease than to learn writing alone." A highly skilful teacher, says Mr. Holbrook, requires a map to be drawn of each country studied, stating it was not only a mode, but the mode of studying Geography. By permitting children, both at school and at home, to make drawings and write descriptions of numerous objects in nature and art, in which their feelings are interested, their hands, eyes and intellects are employed and their minds constantly stored with new ideas.

Mr. Holbrook refers to his own experience as having been gained "after a continued course of experiment for more than twenty-five years on subjects and modes of teaching." The theory of Self-education became the basis of his system—the natural sciences the right avenue to the domain of knowledge, and the best agency in the moral as well as the mental training of children. His efforts were directed to two classes—to children as children, without any regard to the social position of their parents; and to working farmers, mechanics, and all manual laborers, whose occupations prevented their obtaining the benefit of a thorough school training, but who by a course of self-education in social lyceums and scientific exchanges, could be elevated to a higher grade of mind and character than they might ever have reached in the routine of the schools.

Every child is naturally his own teacher. He teaches himself things, and everything coming under his own observation—animals, vegetables, minerals, tools, and the operations of farmers, mechanics and housekeepers. He teaches himself by seeing, hearing, tasting, smelling, feeling, talking, handling, using, and comparing things and their operations with each other, also noticing cause and effect.

Every child under six years of age has an intellectual or scientific taste, or a strong love for the productions and the operations he witnesses in the great cabinet and the great laboratory of Nature. He is also disposed to collect a cabinet for his own amusement and instruction. When children are encouraged and aided by parents and teachers, their taste for science, for intellectual and moral pleasures, is greatly strengthened; if neglected or discouraged, this taste is lessened and more often entirely lost.

Every child of common talent learns a language before he is three or four years old. When children are taught, or attempted to be taught, in school they are usually a long time in learning the Alphabet, and thousands, and hundreds of thousands, now¹ in our country, who have professedly studied from two to five years the "art of speaking and writing correctly," neither speak nor write any more correctly than those around them, who never got a lesson or saw a grammar. Is this defect in the pupils or

¹1841.

the mode of teaching? An answer to this question will be attempted in the future numbers of "The Self-instructor." Modes will be pointed out by which adults, as well as children, can teach themselves. Not only teach themselves, but by a course of self-instruction secure the highest enjoyment, and certain respectability and usefulness. Hints, suggestions, and plans, will be thrown out for the benefit of parents, and especially mothers, for the best of all intellectual workshops—families—also for teachers as aids in enlisting them in the improvement of their pupils. "The Self-instructor" will also contain short, practical lessons in the sciences, for the entertainment and instruction of children both at home and at school.

KNOWLEDGE OF THE EARTH.

Geography, geology, and geometry, furnish lessons for substantial instruction to children. From a field, garden, yard, are obtained the elements of geography. A rock, the door-stone, or gravel in the streets, afford a useful and necessary inlet to the wonders of geology. A table, pitcher, plate, apple, and everything else which has form, embrace principles of geometry, and convey to a child's mind some of its first, most delightful and useful impressions.

By a globe and maps for geography, specimens of minerals for geology, solids and diagrams for geometry, with a slate and pencil for drawing and writing, encouraged by the parent or teacher, no child fails to be employed, interested and instructed, or to learn to read, write and spell, sooner and better than any one does or can from mere formal lessons from books. Can any one doubt that natural instruments of instruction, furnished in great variety and richness by the hand of our Creator for the intellectual and moral creatures of His power, in their early thirstings and reaching after knowledge, are better than the instruments of human contrivance, furnishing at best but the arbitrary signs of knowledge?

When once started in the track of knowledge—real knowledge, not unmeaning words—children have no disposition to stop in their course. From the first pebble that meets their eye they can proceed to the elements and structure of the whole globe. From these, to the upheavings of mountains and the outbreaks and outpouring of volcanoes, they are led thus to examine the great

monsters and little monsters once teeming with life and action upon our earth, but now forming a great part of the rocky mountain masses composing the earth. From the elements, the structure, divisions, motions, changes and productions of the earth, their attention is naturally carried to the heavens—from geography and geology to astronomy.

In a letter received from Mr. Holbrook, January, 1842, he writes: "It is an encouraging circumstance that numerous minds in different sections of the country are taking the same practical common-sense view of early education, as distinguished from the systems of abstractions and theories so common in schools. The first and best knowledge for the elementary work, is an acquaintance with the simple, beautiful and practical principles and objects, so delightful to every child, and brought into use in every pursuit of human beings.

"By making nature the ground-work of an education, reading and writing come as a thing of course. The wants of a child impel him to learn them as instruments, not as sources or objects of knowledge. I have known several cases in which children learned to read by themselves. If the bla, ble, blo, system could be abandoned for a system of practical knowledge, in learning tools by their use, such cases would not be exceptional."

THE CAPABILITIES OF CHILDREN.

With all the partiality of parents for their children they are little aware of their capabilities. What are these capabilities? How are they exerted? What do they perform? What is the proper mode of directing them, and to what extent can they be improved? are questions of deep interest to parents, and scarcely less so to the philosopher, the philanthropist, the statesman and the Christian. To answer these questions, the first thing is to look at facts, to learn what they desire to do, and what they are capable of doing, by what they actually perform while acting freely.

The first thing prominent is their ceaseless activity. Even before they can walk their physical exertions are to the extent of their strength. Children not only acquire ideas rapidly, but words to express them. Every child soon learns just as many words as he has occasion to use, and no more, as he learns them by using them.

Still more remarkable is their moral power. If one principle is innate, as shown in children, it is an approval of what they deem right, and a disapproval of what they believe to be wrong. Any one witnessing the moral character shown in their acts, must see the truth and force of the repeated remarks of the Saviour, recognizing them as worthy of imitation. How lamentable, then, that parents and teachers, with others around them, by their contracted and selfish treatment, should obliterate the natural feature of their character.

No fact can be more fully proved, than that a class of children of a larger or smaller growth can acquire larger mental treasures by a three hours ramble in a field, through a forest, over a mountain, on the banks of a river, by the way-side, or in a garden, than they often acquire by three weeks over books.

Geological or botanical excursions, the breaking and gathering of minerals, or the collecting and arranging of plants, are modes of giving employment to the body in connection with the mind at once healthful and delightful. A successful teacher in Philadelphia remarked, on his returning from a geological excursion with his pupils, they learned more that afternoon than they ever learned at school. In some instances schools were specially adapted for teaching the natural sciences, having all the requisite facilities provided for illustrating the different branches.

It is evident from other sources than the statements of Mr. Holbrook's persevering efforts, that there must have been an awakened interest in the importance of education not only in those who were teachers by profession, but among statesmen who regarded its ultimate bearings upon the character and destiny of the government and the people.

De Witt Clinton, when Governor of New York, in his message to the Legislature said: "Every effort ought to be made to fortify our free institutions; and the great bulwark of security is to be found in education—the culture of the heart and head, the diffusion of knowledge, piety and morality. Upon a proper system of education and correct modes of teaching, we must rely for the purity, the preservation and the perpetuation of republican government." Among the subjects he referred to, as valuable lessons, in childhood, as preparatory for future manhood, "were the elements of the physical sciences, the fundamental principles

of agricultural and political economy, with much in history and biography."

In the *National Intelligencer*, in 1838, in an article on Popular Education, we find the following:

"The enlightened friends of republican government have now but one opinion as to the true means of preserving and perpetuating the system, and that is by an immediate adoption of active measures for promoting a more general and liberal system of education of the rising generation. We are pleased to see our vigilant and enlightened fellow citizens at the north are turning their direct attention to this important matter."

At a convention held at Concord, Massachusetts, the following subjects were committed to several committees: 1. In what order should the various branches of knowledge be taken up in the natural progress of the human mind. 2. To what extent and by what means should moral education be promoted in common schools. 3. On the best means of exciting the community on the subject of education. 4. On the expediency of making the course of instruction in common schools so ample and various as to meet the wants of all classes.

II. In 1826, a few farmers and mechanics in a small village in Massachusetts, organized a society entitled "The Millbury Branch of the American Lyceum;" its object—the mutual improvement of its members and the diffusion of knowledge. From that humble, but dignified and republican origin, has arisen the general institutions of lyceums, now in operation² in many sections of both continents.

It is evident, if farmers and mechanics through the country, generally, should enlist in the work of self-education, they might reform and perpetuate our republican institutions and hand down Christian Republicanism to posterity. Without that step, it is equally evident that though the American Republic may retain its name, Republicanism in America will only be known by its ruins.

The union of manual labor and study was a favorite plan of Mr. Holbrook—which he regarded as the right basis of social as well educational reform. He says, "that to deprive the laborer of a sound mind and the student of a sound body, is a vain attempt to cast asunder what God intended should be joined together."

² Nov. 1841, *Self-Instructor*.

Similar suggestions, as *ideas* simply, and not of *plans*, have recently appeared in 1875, on the importance of "Industrial Training and Art Education in the Public Schools," owing to the fact asserted "that the larger number of the children belong to the class which must earn their living by manual labor." The "advantages and benefits to be received from drawing and the arts of design to mechanics and artisans," are also brought as prominently forward as by Mr. Holbrook many years ago. Another writer says: "With all our boasted improvements in education, there is little headway made against the increase of popular ignorance. In order to meet the evil, a kind of culture adapted to the masses of the people is a prime necessity. The schoolmaster holds a position of vital interest to the destiny of the republic, and should neglect no means for the wise and efficient discharge of his significant functions."

Mr. Holbrook's efforts were, also, in his day, directed to individual, social and national interests, through the primary importance of a true education upon the right basis.

[From Self-Instructor, Feb. 1842.]

FARMS AND WORKSHOPS.

"The time is coming when farms and workshops will be no less valued as institutions of learning than for producing every variety of food, clothing and implements; not merely for acquiring a knowledge of agriculture and the mechanic arts, but of the whole circle of useful knowledge, including the sciences, history, biography and the manners and customs of nations, &c. Are not all farmers and mechanics experimenters in science? Does not every mechanic in every operation he performs apply and, of course, illustrate some principle of science? Which of the natural sciences does not the farmer use in his business? Is not Botany or a knowledge of plants essential to the success of every farm? Is not Geology which treats of the elements of soils and mode of improving them, at the very foundation of Agriculture? Do not the grasshopper, cutworm, wheat fly and many other insects give to farmers expensive lessons in Entomology? By more attention to the subject, might they not acquire their knowledge under less expensive tuition? If any implement used by the farmer violates any principle of Philosophy, does it not impose upon man and beast unnecessary labor? In dividing farms, in laying out fences, in erecting buildings and other operations, do not farmers make a constant application of Geometry? Does any other pursuit afford as good advantages for the cultivation of

honesty, sound morals or of piety as farming? Do not their winter evenings afford favorable opportunities for reading, and by conversational circles in Social Lyceums for aiding each other in their reading, scientific experiments and almost any mode of improvements that may be desired?"

In another place Mr. Holbrook says of farmers who have thus improved themselves by self-culture: "They will never fail to make our safest and most enlightened legislators, and the great dependence of every nation, physically, intellectually, morally and religiously."

Mechanics next to farmers are the most numerous and the most important class of the community. Whatever promotes their interests promotes the interests of the public. They, like farmers, have great facilities and great inducements to become men of science and sound knowledge. Every mechanic brings into use some principle of science, which principle it is of course his interest and his convenience to understand. Every apprentice boy who spends a few minutes daily in useful reading and other modes of improvement will in all probability be a man of future influence and respectability. The apprentice who seeks the interest of his employer, promotes his own interest, as character is the best capital a young man can have for the commencement of business. Mechanics, like farmers, make safe and enlightened statesmen. They are fitted for legislators and other offices, because educated in the schools of experience. Who can be better qualified to make laws for aiding the operations of business than those engaged in these operations.

SOCIAL LYCEUMS.

The social lyceums referred to by Mr. Holbrook as one of the favorable opportunities for farmers and mechanics in acquiring knowledge by self-instruction, appear to have become popular among all classes in the large cities. We have no definite information whether they were first introduced in Europe or America, but Mr. Holbrook speaks of the first organized in 1826 as a branch of the American Lyceum and as the precursor of others.

"The Scientific Apparatus," and "The Self-Instructor" added to the zealous efforts of Mr. Holbrook, in behalf of "Social Lyceums" and "Scientific Exchanges" were no doubt the means of bringing them into general notice and appreciation. From

not having seen a description of their organization, the order of their exercises and the manner in which subjects were introduced, information was requested and given. "The most beautiful form of the Lyceum," writes Mr. Holbrook, "is the reading and conversational circle, consisting of half a dozen or ten or fifteen ladies and gentlemen, who meet weekly at their own houses." These social lyceums are the purest republics in existence. Every individual, old and young, males and females, learned and unlearned, are on the same footing as nearly as the circumstances of the case will admit.

Ladies not only participate in the exercises of the meeting; but they fill a portion of the offices, and fill them with efficiency and dignity. The president is commonly a gentleman and the secretary a lady. They vary much in their exercises. The following is nearly the order of exercises in this city (New York).

1st. Reading the minutes of the last meeting. 2d. Exhibiting specimens of nature and art. 3d. Hearing correspondence with other societies or individuals. 4th. Reading original pieces or extracts from books upon the subject selected for the evening. 5th. Answering questions assigned the previous meeting to the members severally. These questions are generally matters of history or principles of science instead of questions of debate. It is one principle in these social circles for each member to use his endeavors to get others formed, also to have every member correspond with some friend or acquaintance in some other place.

You will, of course, perceive that such small circles in great numbers will form tributaries to more general meetings. Suppose, as a common arrangement, that these social lyceums meet weekly, and larger ones, composed of these, meet monthly, and still more general societies meet quarterly. Arrangements, of course, are varied to suit different circumstances, pursuits, tastes, etc. Our motto is "Exchange or Coöperation." Within a few years past, small circles formed for social, intellectual and moral improvement, have been organized in great numbers in Boston, Philadelphia, New York and many country villages and neighborhoods. Between these circles have been a correspondence and a kind reciprocation of views and efforts, full of gratification to the individuals concerned and of usefulness to our country and the world.

CABINETS OF NATURE AND ART.

At one time a museum or cabinet of curiosities could be examined only in a few of our principal cities. Now, similar collections are common in schools and families in various sections of the country. Some twelve years since,³ a juvenile lyceum in Boston prepared a number of small cabinets of geology and sent them to the members of the Legislature, then in session, to be circulated among the schools in their respective districts.

The next legislature ordered a geological survey of the State, for which Professor Hitchcock was appointed geologist. About eight years since, by a similar agency in Philadelphia, small cabinets were sent extensively through the State of Pennsylvania and a large one placed in the capitol in Harrisburg. The next legislature ordered a geological survey, making provision for a cabinet in every county in the state. A geological survey of nearly every state has now been completed.

About six months since, a gentleman made an incidental visit to a school of 40 boys, to whom, at the request of the teacher, he gave a short lecture on geology, in which he recommended the formation of geological cabinets. With all the ardor of young spirits in a good cause, the boys procured some old cigar boxes, which they cut, partitioned, papered and filled with minerals. One of the boys, wishing to obtain admittance to the fair of the American Institute, applied his knowledge of geology for that purpose. He prepared a neat mahogany box, which he filled with minerals, collected, arranged and labelled by himself, and then sent it to the Institute. For this he received a ticket of admission, and was awarded a diploma for the second best collection of the kind received for the exhibition. The young ladies in a seminary in Massachusetts sent to the members of a similar institution in Georgia a box of geological specimens. In a few weeks a collection of plants was received from Georgia in return, which exchanges continued between the two schools for several years, greatly to the advantage of all the parties concerned. In less than two years after the box was sent, the young ladies in Georgia had collected a large cabinet of minerals, a botanical cabinet and a library, each in a beautiful case, and were in

³ 1829.

correspondence with schools and lyceums in seven different states.

III. Grounded on the great mutual advantage of a system of scientific commerce, an Exchange Lyceum is organized, the leading object of which is to institute and extend Scientific Exchanges through this and other countries. A depository is provided for this Lyceum, designed as a place of scientific resort, and for depositing, examining and exchanging specimens of any department of nature and art. Not merely minerals, plants, shells, drawings, prints and other specimens in the various departments of science and art, but books may be exchanged, greatly to the advantage of the two parties which may be concerned. In hundreds and thousands of cases, persons have books, perhaps duplicates upon which they may place but little value, but which would be of the highest value to some other individuals, whose taste or pursuits would bring them into requisition.

A few days since, a gentleman from the country called at the Exchange Lyceum, New York, with a box of minerals for which he wished and received others in return. The specimens he brought were rare here, and those given in return, though abundant here, are rare in the part of the country from whence he came. Though the specimens he left with the Lyceum were worth a hundred times as much as those he received, yet the stranger remarked that he had the best of the bargain and would send another box, and in a few days fulfilled his promise. Cases of a similar character are of frequent occurrence.

Another more striking instance of the benefit of exchanges is copied from a letter received in April, 1873. "An example, perhaps, will give you the best illustration of the operation and results of the scientific commerce referred to: Not long since a young physician from New Hampshire called at the Lyceum with a drawing of the laurel (*Kalmia latifolia*,) requesting for it, minerals in exchange. A day or two after, he called with a large size drawing of the human skeleton, requesting also minerals in exchange, and asking if I would like a drawing giving a back view of the human frame. He took minerals for the whole, which he said he should use for promoting a taste and knowledge of science in New Hampshire. A few days after, a young man just commencing a course of medical studies brought in an English Herbarium—a col-

lection of English plants, wishing to dispose of them in some way to aid him in his studies. He asked if he could have one of the drawings of the skeleton above mentioned: to this he received an affirmative answer.

"The result was, the young physician was furnished with a cabinet of minerals for promoting science in another State, a young medical student was aided in the course of his studies, and the Lyceum was furnished with a drawing of a human skeleton and a drawing of one of the most beautiful shrubs, in connection with the moral and intellectual influences arising from visits to a Scientific Depository, with the kindred spirits from different parts of the world."

Professor Silliman of Yale College is engaged by the Exchange Lyceum to give in New York a course of lectures on Geology the first week in May (1842). In connection with the lectures, specimens will be arranged at the Exchange Lyceum so as to illustrate the subjects presented. Special arrangements will be made for excursions to collect specimens or increase the collections of the members for exchange with their friends.

Rev. John O. Choules is engaged by the Lyceum to give a course on English History, in connection with a course of reading and written abstracts, by those who attend his lectures.

On Chemistry, Botany, the English Language, Drawing, Geometry and other branches of mathematics, courses of weekly or semi-weekly instruction will be provided.

A course of lectures is in preparation on the history, character, duties, rights and influence of woman—to be given by a lady before a morning class of ladies. They will give a view of woman as she has been, as she is, as she may be, as she ought to be—as a daughter, sister, wife, a mother, a Christian and a member of the great human family.

The extension of scientific exchanges with other lands was a cherished plan with Mr. Holbrook. The "Self-Instructor" was intended to be the preparatory medium for their introduction in foreign countries as its successive numbers had in his own. An extract from a letter thus mentions their publication: "Only four numbers of the *Self-Instructor* have yet been published, owing to a multiplicity of engagements which prevented my giving it the necessary circulation. It will, however, be continued, and

as the numbers published have been translated into Spanish in the city of Mexico, for circulation in schools and families in Mexico and South America, it will virtually be a medium of correspondence and an instrument of scientific exchanges between those countries and this."

Mexico and South America are now opened as a field of intellectual and moral culture. Various individuals of the greatest influence and in situations the most favorable for promoting a system of coöperation between those countries and this, have visited the Exchange Lyceum within the year past, and have expressed the greatest confidence and spoken with enthusiasm of the enterprise in progress contemplated by the Lyceum system, especially the system of scientific exchanges. Three letters from foreign officials are published in the *Self-Instructor*, December, 1844, acknowledging the value of the system, the benefit of the scientific apparatus in elementary education, and the scientific exchanges, as tending to promote an enlightened and pacific intercourse among nations. They also promise their aid in its extension through their countries as far as their position enabled them. One of the letters was written by General Almonte, Minister Plenipotentiary of Mexico, another by the Brazilian Consul, and the third by the Venezuelan Consul.

Dr. Thompson, for many years agent of the British and Foreign Bible Society in South America and Mexico, at a meeting of the friends of education held at the American Institute, gave a narrative of his efforts in Buenos Ayres, Chili, Peru and Mexico, and the favor with which his efforts were received. He spoke with great interest of the apparatus and plans of Mr. Holbrook for promoting the cause of public education in all countries, and especially in the Southern Republics.

Mr. Holbrook was then introduced to show the advantages of the "Educational Tools," comprising the apparatus for the advancement of primary education. Resolutions were introduced approving it as being adapted to the object proposed, and recommending its adoption by the trustees of the public schools, and especially to the guardians of orphan asylums and houses of refuge—as uniting amusement with instruction.

Mr. Holbrook spoke of "Scientific Exchanges" as being established several years previous, and that Alexander Vattemare, of

France, had secured for a kindred enterprise the patronage of several governments. Chevalier Friederichsthal, Secretary of Legation for Austria, is also devoting his life to the same system, and will gladly make large returns for any specimens of American productions sent to him at Vienna. It was one of the special objects of the New York Depository to institute regular exchanges with similar establishments to those of M. Vattemare and Chevalier Friederichsthal, and through these, with institutions in Europe, Asia, Africa, and the islands of the sea.

In presenting the system and plans of Mr. Holbrook, by gathering portions here and there, from the few records in my possession, it is evident there was a higher object he endeavored to promote than mere scholastic education or scientific knowledge for children or adults.

Among the many testimonials from school trustees and superintendents, there is one from an agent of "The Public School Society," that enters into full appreciation of the whole scope of Mr. Holbrook's views—as to intellectual training and the higher object to be attained. After referring to the elements of the sciences, each separately illustrated by the apparatus, the writer says: "Thus, without anything extraneous or perplexing, *distinct ideas* are conveyed to the untaught mind. To those acquainted with the right principles of teaching, it is unnecessary to speak of the value of knowledge thus obtained—it becomes a *perpetual possession*." Mr. Holbrook's plan of "Scientific Exchanges" is no less of a practical bearing, and in its tendency yet more valuable, directly cultivating habits of industry and developing the social and benevolent affections; at the same time cultivating the faculties and improving the use of the senses, giving elevated ideas to the morally degraded, and offering a successful means of reform from idleness and vice. As a great means of mental and moral development, they are worthy attention by all who desire to promote useful knowledge and to seek the real benefit of their fellow men.

We know nothing of the scientific acquisitions of Mr. Holbrook, or of his ability to lead his pupils into the higher branches of these studies. It was not his intention or his aim, that those aided by his plan should possess as profound views as those who could afford to spend years in these pursuits. In giving "the keys of

knowledge" they had the opportunity to open the doors at the fitting time, when the need should be most felt.

It is said by Arnauld, the friend of Pascal, that "Wise men ought to make their sciences the exercise and not the occupation of their mental powers. Men are not born to employ all their time in measuring lines, in considering the various movements of matter; their minds are too great and their lives too short, their time too precious, to be so engrossed; but they are born to be just, equitable, and prudent, in all their thoughts, their actions, their business: to these things they ought especially to train and discipline themselves."

ELECTRIC FISHES.

THE most interesting topics of science are those points at which several departments meet. Here men become truly scientific, are forced to take broader views, and cease to be specialists only. Each investigator steps out of his own province to shake hands with his neighbor. Notes are compared, different lines of research placed side by side, and new thoughts suggested in great variety. Take for example the spectroscope and its applications, in which chemistry, physics, and astronomy share. One science is made from three, and each is lifted into higher relations with nature. The electric fishes afford us another connecting link between diverse branches. These strange creatures interest alike the naturalist, the physiologist, and the electrician. To each department they furnish abundant material, both for experiment and speculation. No other living beings are more suggestive of thought. It is my purpose in these pages to summarize briefly what is known concerning them, especially upon the electrical side.

Four, and perhaps six genera of fishes are known to contain species having electrical power. The four which are well vouched for are *Torpedo*, *Gymnotus*, *Malapterurus*, and *Tetrodon*. The doubtful genera are *Trichinus* and *Rhinobatis*. One species of the former, found in the Indian Ocean, is said to be electrical; and one of the latter, from Brazilian waters, has been reported

capable of giving shocks. These two need verification. Many other fishes possess rudimentary electrical organs, which are, however, not sufficiently developed to warrant special notice here.

The electrical *Tetrodon*, also, has been but meagerly described. It was discovered almost a century ago by one Lieutenant Paterson of the 98th English Regiment, who made his discovery public through a letter to Sir Joseph Banks. The Lieutenant was on the island of Johanna, one of the Comoro group, in the Indian Ocean. Here, in cavities among the coral rocks, he found some strange fishes—two of which he captured by means of a linen bag. Taking one of them in his hand he experienced a severe shock, which forced him to let go his hold. He recaptured the creature, however, and carried it two miles to camp, where, although in an enfeebled condition, it still had power to give slight shocks to others as well as to himself. The fish, which soon died, was about seven inches long by two and a half broad; was spotted with various colors, and had a long, projecting mouth. (See Paterson's letter, with a poor illustration, in Vol. 76 of the *Philosophical Transactions*.)

Of the other electric fishes the *Torpedo* seems to be best known. From time immemorial it has attracted the attention both of students and of fishermen. Aristotle and Pliny described it, while Galen and Dioscorides recommended its shocks for curing headache and gout. Medical electricity over two thousand years ago! Of the *Torpedo* there are several species. Two, if not more, are found in the Mediterranean, along the Atlantic coast of France, and rarely in English waters. Others have been captured near the Cape of Good Hope, another is found along our own Atlantic seaboard, and Humboldt describes one which he saw at Cumana, taken in the Caribbean Sea. In shape the *Torpedo* resembles the Skate very closely, belonging in fact to the same class of fishes, being broad and flat, with an elongated tail, and a generally repulsive appearance. In size these creatures vary considerably. The *Torpedoes* from the Cape of Good Hope are rarely over eight inches long. Those of the Mediterranean and the French coast are larger, and a fish of sixteen inches long by seven broad is reckoned of average size. But in English waters, especially at Torbay, they sometimes grow to prodigious dimensions. Noad mentions

one which was four and a half feet long, and weighed seventy-three pounds. They are captured only with nets, never being known to bite at a hook.

Of course the peculiarities of the Torpedo have led to its receiving a variety of characteristic names. In England it is known as cramp-fish, numb-fish, and electric ray; in France as *la tremble*; and in Malta as *haddayla*, a word which refers to its benumbing power. Sometimes its flesh is eaten by the poorer classes, although the electrical organs are scrupulously avoided, being slimy and disagreeable. But it is with these organs that we have chiefly to do. The uninitiated person who for the first time boldly grasps a Torpedo is likely to be very much astonished. A lively fish sixteen inches long will give him a more violent electric shock than any common person can bear. If, however, he should be plucky, and retain his hold upon the creature, the latter will soon exhaust itself, and be for some time unable to generate any more electricity. But for a while the shocks will succeed each other very intensely, and with great rapidity. Walsh obtained fifty shocks from a vigorous Torpedo in one minute and a half, and by means of wires was able to transmit the impulses through eight persons at once. After the fish has become languid, it needs a long rest to recuperate its powers. When it is in full vigor the shocks are emitted from all parts of its body, but soon limit themselves to the immediate vicinity of the head. They are voluntary in character, being given off at the option of the Torpedo, which cannot, however, control their direction. Ordinarily a shock is not felt upon merely touching the fish; the latter needs first to be irritated, best by pricking its fins. In shallow water the Torpedo has the unpleasant habit of superficially burying itself in the mud, in which condition it emits its most powerful strokes. Then the unhappy bather who inadvertently treads upon the spot receives a charge which literally knocks him over. Imagine a colony of torpedoes at Newport, Cape May, or Long Branch!

In the early days of electrical science there was, of course, much discussion over the Torpedo. Was its shock really electrical, or due to some different force? This question has been thoroughly answered. All the leading phenomena of electricity have been observed in the discharges of this fish. Walsh transmitted the stroke through wires, Father Linari obtained a visible spark,

and John Davy (brother of Sir Humphrey Davy,) decomposed water by its means, and magnetized steel. A female specimen, rather languid, sixteen and a half inches by seven in dimensions, with one shock magnetized feebly four bars of steel weighing seventy-five grains, and powerfully two small sewing needles. One of the latter acquired the property of sustaining three times its weight of iron. In a general way the discharge resembles that of a Leyden jar; the positive pole of the battery being at the back of the fish, and the negative pole at its belly.

What sort of an apparatus does the Torpedo employ? This question has been pretty well answered by the investigations of Hunter, Lethby, Matteucci and others. Especially to Matteucci are the heartiest thanks of the scientific world due. The electrical batteries are two in number, arranged systematically, one on each side of the head. At first sight they seem to have the structure of honeycomb, being made up of many irregular prismatic columns, each about an inch and a half long. These prisms, which are generally hexagonal or pentagonal in form, although the shape is not always clearly defined, lie closely side by side; about four hundred and seventy in each battery. This is in a fish of ordinary size; but in the seventy-three pounder, already mentioned, there were eleven hundred and eighty-two of these columns upon either side. On close examination each prism is found to consist of many little cells, sometimes nearly two thousand in number. These minute cells are filled with a solution of what is apparently albumen, and are separated from each other by wonderfully thin membranes, every one of which is connected with a fine nerve fibril. These are the elements of the battery; and each prismatic pile, containing its hundreds or thousands of them in the space of an inch and a half, seems to form a kind of battery by itself, capable of discharge apart from the rest of the organ.

Connecting the batteries with the brain of the fish are great bundles of nerves, which have excited much astonishment among physiologists. What an enormous quantity of nervous energy the Torpedo must have, and how little of it goes to help carry on the truly necessary functions of life! It is almost all expended in the support of the electrical organs, which are not by any means indispensable to the fish. The Torpedo can be deprived of them, and

still seem to perform all the processes of life, nearly, if not quite as well as ever. They are luxuries to him, and not necessities of existence. Upon the integrity of these connecting nerves depends the electrical power of the creature. If they are severed, no farther discharges are possible. If but a few of the nerves are cut, the parts of the battery with which they communicated are rendered inactive. And if one fibre only is irritated, no part of the organ save that with which it connects is discharged. These facts, with many others of importance, have been made clear by Matteucci, who made vast numbers of experiments upon living Torpedoes. He removed parts of their batteries, examined their brains, dissected their nerves, excited them with artificial electricity, and tried them with poisons. In an article like this it would be impossible to do full justice to his valuable results. Suffice it to say that the battery of the Torpedo, or of any other electric fish, is an instrument for converting nervous into electrical energy; and that a part of it, a single prism, or even a single cell, can work as perfectly, though of course not as powerfully, as the whole. A few more words are needed, however, with regard to the uses of the battery to its owner. Some of these may be easily seen at a moment's reflection, namely its uses for offense and defense. The Torpedo captures its prey and repels its enemies with one and the same weapon. Still other possible uses of the battery have been suggested by Dr. Davy. He observed its connection with the nerves of the stomach, and found that digestion was almost, if not wholly arrested in a fish worn out by many successive discharges. Hence he concluded that the surplus electricity of the creature, when the latter was at rest, might in some unexplained manner go to aid in the digestion of its food. Furthermore he suggested that the Torpedo, when buried in the mud, might use its electrical power for the decomposition of water, in order to obtain fresh supplies of oxygen. Both conjectures are plausible, and deserve more notice than they have ever received.

More interesting than the Torpedo, being larger, stronger, and even stranger in its anatomy, is the *Gymnotus electricus*, or so-called "electric eel." This extraordinary fish, which abounds in many of the rivers and fresh water lagoons of Guiana, Venezuela, Colombia and Brazil, seems first to have attracted the attention of Europeans during the latter part of the seventeenth

century. But it was very long before scientific men had any opportunity to study its habits and peculiarities. In 1775, however, a lively specimen was carried by a sea-faring man to Philadelphia, where it was carefully examined by Dr. Hugh Williamson. He described it as being much like a common eel in its outward appearance, about forty-three inches long, and two inches thick near the head. Small fishes placed in its tank were killed by a single shock, without being touched bodily, and then eaten. Many experiments were made upon the strange creature, and its remarkable power was identified as electrical. About the same time another specimen reached London, where it died, and was dissected by the famous John Hunter; and early in the present century a third *Gymnotus* was carried to Sweden, and examined by Fahlberg. A very little later, Humboldt, traveling in South America, studied the habits of the fish under the most favorable circumstances, and gave us almost all we know concerning its domestic peculiarities. Since that time a number of living *Gymnoti* have been transported to Europe, where they have been subjected to a great variety of experiments. One fine specimen, which was many years ago on exhibition at the Adelaide Gallery in London, was for a time placed at the exclusive disposal of Faraday, who studied it with his usual ardor and enthusiasm. With its discharges he made magnets, effected chemical decompositions, and obtained visible sparks; proving conclusively their electrical character.

In size and appearance the *Gymnoti* vary a great deal, there being probably several species. The average length is about thirty-one inches, although Humboldt measured some which were over five feet long. Other travelers have heard the natives speak of eels twenty feet in length, giving shocks instantaneously fatal. If the natives were more habitually truthful this would be easier of belief. Humboldt heard of a small, black, very powerful variety, inhabiting the marshes of the Apures, but saw none of them. Those which were caught in his presence were of a fine olive-green color, with two rows of spots extending symmetrically the whole length of the back. A fish forty-six inches long weighed twelve pounds.

Humboldt's description of the capture of *Gymnoti* is so wonderfully vivid that we quote his own words. Izaak Walton would

hardly have appreciated such fishing. At the outset the Indians had driven about thirty wild horses and mules into the pool where the fish were.

"The extraordinary noise caused by the horses' hoofs makes the fish issue from the mud, and excites them to the attack. These yellowish and livid eels, resembling large aquatic serpents, swim on the surface of the water, and crowd under the bellies of the horses and mules. A contest between animals of so different an organization presents a very striking spectacle. The Indians, provided with harpoons and long slender reeds, surround the pool closely; and some climb up the trees, the branches of which extend horizontally over the surface of the water. By their wild cries, and the length of their reeds, they prevent the horses from running away and reaching the bank of the pool. The eels, stunned by the noise, defend themselves by repeated discharges of their electric batteries. For a long interval they seem likely to prove victorious. Several horses sink beneath the violence of the invisible strokes, which they receive from all sides, in organs the most essential to life; and stunned by the force and frequency of the shocks, they disappear under the water. Others, panting, with mane erect, and haggard eyes expressing anguish and dismay, raise themselves, and endeavor to flee from the storm by which they are overtaken. They are driven back by the Indians into the middle of the water; but a small number succeed in eluding the active vigilance of the fishermen. These regain the shore, stumbling at every step, and stretch themselves on the sand, exhausted with fatigue, and with limbs benumbed by the electric shocks of the Gymnoti.

"In less than five minutes two of our horses were drowned. The eel being five feet long, and pressing itself against the bellies of the horses, makes a discharge along the whole extent of its electric organ. It attacks at once the heart, the intestines, and the caeliac fold of the abdominal nerves. It is natural that the effect felt by the horses should be more powerful than that produced upon man by the touch of the same fish at only one of his extremities. The horses are probably not killed, but only stunned. They are drowned from the impossibility of rising amid the prolonged struggle between the other horses and the eels.

"We had little doubt that the fishing would terminate by kill-

ing successively all the animals engaged ; but by degrees the impetuosity of this unequal combat diminished, and the wearied *Gymnoti* dispersed. They require a long rest and abundant nourishment to repair the galvanic force which they have lost. The mules and horses appear less frightened ; their manes are no longer bristled, and their eyes express less dread. The *Gymnoti* approach timidly the edge of the marsh, where they are taken by means of small harpoons fastened to long cords. When the cords are very dry the Indians feel no shock in raising the fish into the air. In a few minutes we had five large eels, most of which were but slightly wounded. Some others were taken, by the same means, towards evening."³

Humboldt also speaks very strongly about the violence of the shock which a large *Gymnotus* can give. He imprudently placed both feet upon a specimen just taken from the water, and received a stroke which left for the remainder of the day a severe pain in his knees and in almost every joint. No wonder that the Indians dread such formidable creatures.

We call the *Gymnotus* an "electric eel," but the expression is incorrect. Although it bears a strong superficial resemblance to an eel, a dissection reveals immense differences. The essential portions of the fish, that is, the parts necessary for life, are quite small—the great prolongation of its body, to which it owes its eel-like appearance, being due to the bulk of the electrical apparatus. This apparatus consists of two sets of organs, and occupies a length of twenty-five and a half inches in a fish thirty-one inches long. Like the battery of the *Torpedo*, it is made up of cells filled with albumen and separated by thin membranes, these membranes being connected with nerves and blood-vessels. The batteries of the *Torpedo* and *Gymnotus* differ, however, in some minor particulars, especially in direction. In the *Torpedo* the cells are arranged in vertical columns, so that poles are formed by the back and belly of the fish ; but in the *Gymnotus* the cells are horizontal, thus placing the poles at its head and tail. When the fish coils itself about its prey the shock passes in a direct line between these two extremities. In most points, however, the electrical organs of the two fishes are similar. They are discharged volun-

³Humboldt's Travels. Bohn's edition, vol. II., p. 114.

tarily, easily become exhausted, and depend for their vigor upon a connection by many nerves with the brain. Few of the differences, after the one already mentioned, can be regarded as essential.

Two species of electric fishes remain for us to notice, both belonging to the Siluri. One, the *Malapterurus electricus*, is found in the Nile, the Senegal, and the Gambia rivers; while the other, the *Malapterurus Beninensis*, was discovered in Old Calabar. The first-named species, called Raasch or "thunder fish" by the Arabs, has long been known. It varies from eight to twenty-one inches in length, has a smooth skin, and bears a family resemblance to its American relative, the common horn-pout, bull-head, or cat-fish. This resemblance is not remarkably strong. The shock which this species gives is not very powerful, when compared with that of the *Gymnotus* or *Torpedo*, and seems to serve only for defense, being too weak for killing prey. Nevertheless it is vigorous enough to bear transmission through a moderately long rod of iron. The *Malapterurus Beninensis*, on the other hand, though smaller, is more powerful. It is not often over four inches long, although sometimes it grows to the size of a herring. A specimen only two inches in length can give a shock which may be felt from the hand to the shoulder. Strangely enough, its electrical properties are used by the negroes medicinally. A sick child is either given a live specimen to play with, or else is placed in a vessel of water with two or three of the fishes. The *Gymnotus* also has been introduced into medical practice, especially at Surinam, and a surgeon of Essequibo, Van der Lott, wrote a treatise upon its therapeutic applications. This, however, is not so remarkable as that the ignorant savages of Old Calabar should have hit upon a remedy which our experienced physicians are hardly more than beginning to appreciate.

One rather laughable incident is recorded relative to the *Malapterurus Beninensis*. Mr. W. C. Thomson, of the Creek Town mission, owned a tame heron; which, caught when very young, had never done any fishing for itself. One day a number of small live fishes were purchased for its food, and among these there chanced to be one of one of these little electricians. The heron had never seen such a creature before, was ignorant and unwary, and at a single gulp swallowed the new-comer. That

heron was decidedly astonished. It uttered a violent shriek, and was thrown heavily backward. After a time it recovered, but it could never again be induced to touch a *Malapterurus*.

The battery of the *Malapterurus* is quite remarkable, and differs very essentially from that of any other known electrical fish. It forms a spongy layer beneath the skin, enveloping, as in a bag, the whole body of the fish, excepting the fins and the extreme end of the snout. From the body itself it is separated by an insulating layer of fat. Examined very closely it is found to consist, not of cells arranged in regular columns, but of cells formed by the interlacing in every direction of many of their membranes. These cells are vaguely octahedral in shape, and are filled with an albuminous liquid. In consequence of this peculiar structure of the battery, the *Malapterurus* emits its shock in all directions, instead of in a line between definite poles.

There are doubtless other species of electrical fishes yet awaiting discovery. But a very small part of the waters of the globe have yet been explored thoroughly. In Africa, the little visited rivers of South America, in Central Asia, the Indian Ocean, and among the many islands of the Pacific, there may be electrical fishes of great interest. Rumors of some such have occasionally reached Europe. Sailors at sea have captured fishes from which violent shocks were given. The field to be worked is large and full of promise; perhaps future exploring expeditions may furnish the material for study.

F. W. CLARKE.

WASTED FACULTIES.

THE truest wisdom of statesmanship should be to frame laws to encourage the use of unused or wasted faculties, and to promote the steady and profitable employment of the people. No nation so well understands this policy as the French, as exhibited by such amazing recuperation, after devastating and almost annihilating wars. Employment encourages thrift and creates taxable property, both of which are vastly important to social progress and national prosperity. Mankind well understand the bane of idle-

ness, for it has long been the text for many a trite sermon. Generally idleness is distasteful. Most men like to be busy, usefully and profitably busy. The human race is organized for action, and finds its highest pleasure in activity.

Legislation can do much to prevent the enormous waste of human energy, of wasted faculty. The subject is well worth the closest study of the most enlightened intellects. Unused faculties should universally be made available in some one of the thousand varied channels of usefulness, to which they severally may be found best adapted. The people all should be encouraged, by wise legislation, to become a vast hive of busy bodies, either of brain or hand.

As the world is now organized, there is a sad lack of opportunity for the exercise of all grades of faculties. The channels of industry are blocked and gorged. The earth teems with raw material, awaiting the magic of labor and capital to mould and fashion into usefulness; but labor stands idle in the market-places, and capital lies piled up uselessly in banks. To-day millions of men are either in enforced idleness, or are unprofitably employed. The waste of productive energy, of unused faculty, may be counted by the daily loss of millions of dollars; and yet, vast as this loss is, it is but as an atom, in comparison to the great demoralization of society by idle habits. Want of occupation for the faculties leads to discouragement, and too often to hopelessness and despair. Misery, suicide and crime follow in its wake. It ruins families, overflows alms-houses and charitable institutions, crowds prison houses and penitentiaries, and supplies ready victims for the gallows!

The world is not over-populated, and certainly its crude products are not all utilized. Properly organized, there should be ample room for the exercise of all grades of faculties, from the lowest to the highest, without conflict and without pressure. Evidently a great organic law is violated, and society is paying a heavy penalty in the loss of material wealth by wasted faculties, and in the demoralization to society from untrained habits. Violated law however contains its own curative germs, and in time these evils will be remedied.

At present, the difficulty seems to be an excessive production beyond marketable wants. No doubt the constant improvement

in labor-saving machinery, adds much to embarrass and complicate the problem. One man, with machinery, does to-day what would have been the work of a hundred, fifty years ago. This ease of production, by machinery, soon gluts the markets. The *consumption* of manufactured products, has not kept pace with their rapid *production by machinery*. As a consequence, unhealthy competition, striving and struggling amidst a large over production, establishes unprofitable prices. Then the spindles, the workshops and counting-houses are brought to a stand-still, and labor is compelled to wait as best it may, through distress and idleness, until consumption has over-reached production, and new life is infused into a profitable industry. So it is, that these uneven pulsations of activity and idleness, follow each other in continuous succession. Now, exhausted markets stimulate excessive production to supply urgent wants, and then the quick action of machinery prostrates and paralyzes these markets, by a too rapid production.

The real want is a regular, steady-profitable, daily industry, *in broader channels*, to engage the faculties of *all* workers, and not these spasmodic throbbings of industry and idleness. This must be accomplished by creating *a larger area, a wider range of consumption*; for it is clear, that a more general demand for the productions of civilized life, will call for a more enlarged use of the faculties to produce them.

Mankind do not hastily break loose from old lines and grooves of thought. It is well that it is so, for the well-being of society, or else all would soon be confusion and chaos. Still, in many things, the world has outgrown the breadth of an earlier civilization. Shackles and restraints have been thrown off. Wider views, one by one, have taken the place of narrowness and prejudice, and sooner or later, the gravest consideration of mankind will be how best to employ wasted faculties.

By many it is considered a dangerous encouragement to extravagance to ask, for the masses, a more diffuse, a wider consumption of the products of industry. They confound a general elevation of the masses, and the more enlarged demands of a higher organization, with the extravagance and recklessness of the dissipated and untrained. They forget that the most enlarged consumption of the products of industry is the surest token

of human progress, and that the greatest safe-guard to society are the surroundings of advancing civilization. He whose hand or brain is busy in the ministry of usefulness, for the comfort or embellishment of life, cannot be very vicious or degraded. The brigands on the moral highways of the world, are not hewn out of such material. They do not come from refined homes, whose inmates are the devotees to trained industry, but are mostly the fungus growth of wasted faculties begetting a low moral nature, and have been entailed upon society for centuries like loathsome hereditary disease. A leprous plague, or an infectious fever, receives prompt attention by man, to ensure its speedy abatement, and yet wasted faculties for generations have been allowed to bequeath an inheritance of demoralization. How strange that moral, more hurtful than physical infection, should be so long passed by and over-looked! We forget how mutual is our dependence on each other. The cultivated, the industrious, the prosperous, must all in some degree come in contact with the ignorant, the lowly, and even the vicious—in domestic offices and in the varied avocations of life. As the average tone of society is surely raised or lowered by the quality of individual influence, merely in a selfish view, it is of the highest moment to us, and to our posterity that this average shall be elevated. A more general refinement is of inestimable value in creating an enlarged field for industry, and so employing all the faculties healthfully throughout the world. By it, the race is stimulated to moral improvement, and through its influence, the various grades of immorality, which are mainly the outgrowth of idleness, are curbed and checked.

It cannot be denied that this social advancement is the general, and instinctive craving of humanity. It shows itself in a longing desire for promotion; but the great problem is to know how to gratify this craving, without pulling down and tearing up old and tried land-marks. Like most vital questions, its statement is easier than its solution. The day, however, is not distant when the influential and powerful will be compelled to meet and grapple with it earnestly and intelligently.

The love of power has always been the most serious drawback to the solution of this question. In all ages, power has dominated over the weak. Its reign, unlike that of kings, has been an un-

broken dynasty from the very beginning. No race, or time is peculiarly responsible for its tyranny. It springs spontaneously in the breast of man. It usually comes hand in hand with the concentration of capital and wealth. It is most often for the acquisition of power, that wealth is so eagerly accumulated, long after it has ceased to gratify all other human desires. Labor has at all time watched, with a jealous eye, the growth of capital as the exponent of power, and neither of them have fairly estimated the true value of the other. Each has always recriminated the other, and to this day, both stand glaring and defiant. Labor and capital are not necessarily antagonistic, any more than the hand is to the foot, or the eye to the ear, but are vitally essential to and dependent on each other. It may be the province of this generation to solve the complex problem between labor and capital, and to work these discordant elements into order and harmony.

As a first step in this march of progress, it is important to society that capital *at a low cost, shall, not spasmodically, but at all times, be freely directed to quicken both mental and physical production*, because in that way the faculties are most largely developed in creating and supplying the largest area of human wants. Capital, and labor, are the handmaids to material prosperity and civilization, through the use of the faculties; or in other words wealth is the result of industry, and capital applied to the crude products of the earth, and is enlarged in exact proportion to the exercise of the faculties. The undeveloped virgin soil, the home of naked savages, is valueless, until the industry of a more or less refined civilization has given an impetus to production.

To quicken production, a uniformly low rate of interest is most essential. It is not the scope of this paper to discuss how best this end shall be attained, but the fact is very certain, that usury and high interest, discourage production, and absorb the bread of industry. He who invests, and reinvests a moderate sum, at only six per centum per annum interest, during the period of an ordinary life, generally aggregates larger, and surer, gains than the man who adds his own industry to a like sum, for a similar period, in the chances of business. This assertion is too sadly the fruit of universal, and bitter experience, to need proof. The deduction

is, that interest rules too high. It is discouraging to industry that loans shall, in the large average, realize better profits than the combined force of brain, hand and capital. It paralyzes effort, and in a thousand ways is harmful to society.

With a *steady, low rate of interest*, industries are fostered; and being fostered, the field is constantly widened. With their growth, they are more and more interchanged, the one with the other. Markets are developed, and wants are created in new directions. The simple requirements of the rustic cabin are changed to aspirations for the various refinements of civilized life, and the premium paid for their attainment, will always be the increasing impulses to industry. Thus the dormant faculties will be exercised, activity will take the place of sluggishness, consumption will be increased, and, as a natural consequence, production will be enlarged: for production and consumption stimulate each other. Each of these, in turn, will furnish fresh nourishment for growth, just as daily food vitalizes the blood and renews the life.

To realize this most wonderful Utopia, as some believe it to be, human labor must be *more largely compensated* in order to furnish a sufficient purchasing power. The products of industry, to be freely marketed, must meet a universal consumption, and this enlarged ability to purchase *can only come* through the increased rewards of labor; for the *general consumption by the masses*, can alone be relied upon, to furnish such large, and stable markets, as will be required to insure the greatest impetus to productive industries. The most lavish, and even wanton extravagance of the present rich, can never provide a market, equal in permanence and breadth, to the vast but moderate consumption by the whole people.

While actual human labor will be advanced, automatic machine labor will cost less and less, thereby largely depreciating the general cost of production. For instance, a one hundred horsepower engine, working automatic machinery, under the direction of five or six men, may in one day, perform what would otherwise be the labor of two or three thousand hands, and while the wages of the few men, the fuel, and other requirements, will be largely increased, yet all this increase, averaged over the large production, will constantly diminish its cost, as machinery is still further

improved and perfected. Invention, it is true, will supplant human labor more and more, but still the constant expansion of consumption, will give full scope to the faculties of man in newer, and wider avenues. Commanding a larger remuneration for his labor, his ability will be increased, to interchange the products of his faculties, for the cheapened products of machinery; and in this way the comforts, the refinements, the embellishments of a higher civilization, will be widely diffused, while the wasted faculties will be utilized, and humanity will be more, and more elevated.

This is no Utopia. It is the channel towards which mankind are surely drifting, and it is the height of folly to shut our eyes to an influence so beneficial, and which so plainly stares us in the face. It is no monstrous horror to chill the blood, but is simply the working out of a great organic law, which has been violated through darkness and prejudice. Interwoven, and blended as we are together, the universal elevation of the whole race, should be hailed by all, as a sure and certain benefit to each individual.

It is for the influential to shape, and mould events and circumstances, so as to promote the best use of the faculties and energies; to lead, not to follow, the coming revolution. To favor labor and enterprise in every possible way, but particularly by encouraging cheap capital, so as to speed progress at the anvil, the mine, the loom, the workshop. It will infuse a new inspiration. Wealth, being largely the product of highly rewarded labor, and acquired then with greater ease, will be more generally diffused, and less and less prized. Its standard of value will be lowered. The virtues will come to the front rank above riches or power. From uncertain speculators, usurers, extortioners, the transformation will be to useful workers, because the best use of the faculties in labor, will be most highly honored, and rewarded. Under such auspices, the world will make wonderful strides in goodness and greatness, and in whatever ennoble man.

Then banishing petty prejudice and narrow selfishness by encouraging the utmost use of wasted faculties, let the clarion watchword of the nineteenth century be "the greatest good to the greatest number," and the marching hosts through succeeding ages, will repeat the cry, until at length disenthralled and redeemed humanity will at last fulfil the crowning glory of creation.

THE MONEY QUESTION AGAIN.

THE industry of men is so largely developed by the division of labor and the constant exchange of commodities and services that many tools and agencies not at first required have become necessary. We propose to discuss money, its substitutes and the devices of the credit system, as we believe the importance of the former is over-estimated and the latter not appreciated.

The agency of money is no more essential to the idea of an exchange of services or commodities than wagons, roads, canals, boats, cars, railroads or steamships. The exchange of commodities is just as effectual when made directly or through the agency of money of account as when actual money is used or when the exchange is made by barter. The exchange of commodities being the object in view, every advantage, facility, security, and economy should be resorted to in accomplishing that object. We must insist, however, upon keeping the object and the agencies of effecting it separate and distinct, as necessary to having a clear view of the whole subject. For while the advantages of a common medium of real value, for which men can safely sell anything they have, and with it as readily purchase anything they require, cannot easily be over-stated, it must not be forgotten that money is not of the essence of an exchange.

Gold, whether in coin or in bars of known purity and weight, is the best material to be used for money, both because it has intrinsic value and because it is acceptable to all men as money. But as it is an expensive and troublesome instrument of exchange, and because it bears so small a proportion to the value of the annual product of the industry of man—the quantity in no country probably exceeding one-tenth of the value of the gross annual product of its industry—it has been found absolutely necessary to have various devices and substitutes for it. And since we must have substitutes for money in order to hasten the societary circulation and to enable man to control matter, it is very important that we should have those substitutes in which we find the least danger.

There are three distinct forms in which a paper currency can be established: 1. As issued by the State; 2. By a single bank, or by several banks restricted in number; 3. By banks established

on the principle of freedom and competition. The two main points to be kept in view in deciding which of these systems is the best, are first, the validity of the note, that is, its constant acceptability by the people as a valid tender in payment of debts and all transfers of property; and second, the steadiness of the measure of value. A State currency, when made legal tender, of course attains the first of these objects fully. Both taxes and government expenses being paid in these notes, they have a value independent of their being convertible into gold. Whether there is much specie or none at all, these notes are always legal tender, so long as the faith of the State is kept. But such a currency does not insure the unchangeableness of the measure of value, for the amount of the notes has no necessary connection with the monetary requirements of the people, and therefore, gives no security that the note shall possess the same value when the time of payment arrives that it did when the contract was made.

There is great liability to excess in the issues, thus producing a depreciation of the note and an advance in the price of commodities. The increase of the issue of the notes inflates prices, creditors losing and debtors gaining. The commercial disturbances that follow the contraction of the circulating medium depreciate the price of commodities, so that the whole debtor class of the community and the holders of merchandise are subjected to loss, often amounting to absolute ruin.

When State currency is irredeemable, this liability to excess and scarcity creates great uncertainty, and a spirit of gambling is generated which is inimical to the interest of honest industry, and very demoralizing in its effects upon the community at large. To men not deeply versed in the details of commerce there seems to be no insurmountable difficulty in deciding what amount of money is needed to make a country prosperous. But it is far worse than useless to attempt to enact laws on this subject. The actual quantity of money required can never be ascertained, for the wants of the people at one time far exceed their wants at another.

It is obvious that at one time, when there is peace, quiet and mutual confidence, a much less quantity of money is required to transact the same amount of business than when there is war, distrust and financial panic. It needs no argument to prove that a law which fixes the amount of currency is as hurtful as one that

gives the Treasury Department power to increase and diminish the amount of currency in circulation at will. Another objection to State currency, legal-tenders, is that the government in issuing them makes a forced loan upon the community without interest. There are times when it is eminently proper for nations to make the sacrifice, but when the cause for which legal-tender notes were issued no longer exists, the proper disposition is a conversion of them into some sort of security which shall be merely capital.

To be convinced that the currency issued by a single bank or by several banks restricted in number, is better than that issued by the State, it is only necessary to understand the national banking system of the United States, approved by act of Congress on the 25th of February, 1863.

The most important of the advantages of this system are in the peculiar species of capital, which serves as an ultimate fund for the redemption of the national currency, namely, United States bonds; and in the uniformity of the currency.

Both the first and second forms in which a paper currency can be established secure the validity of the note at all times, but there is nothing to insure the steadiness of the measure of value.

Let us now turn to the third form in which a paper currency can be established, namely, by banks established on the principle of freedom and competition; and to that end we suggest the enactment of the following law.

Let it be enacted that the Comptroller of the currency issue to associations of individuals for the transaction of banking business, national currency to any amount, upon due proof of organization in accordance with law. That each stockholder shall be liable for losses for a sum equal to the amount of his stock. That national currency be issued to such institutions upon due proof that a deposit of United States bonds has been made with the Treasurer of the United States. That such issue shall not exceed ninety per cent. of the par value of the bonds deposited as aforesaid. That banks shall hold a reserve of twenty-five per cent. of the amount of their deposits in gold or in United States four or four and a-half per cent. bonds. That said reserve shall never be kept with other banks. That banks shall not be required to hold a

reserve for the redemption of their circulation—that being secured by the United States bonds deposited with the Treasurer of the United States, by the liability of the stockholders for losses, and by the capital of the banks not invested in United States bonds. That banks shall receive interest at the rate of four or four and a half per cent. per annum on the bonds deposited as aforesaid. That banks shall be subject to no national tax. That banks shall pay no interest on deposits. That banks shall redeem their circulation on presentation, in sums not less than fifty dollars, in gold or in United States four or four and a half per cent. bonds, at the option of the bank. That the Comptroller of the currency, or any sub-treasurer of the United States, shall issue currency to the banks in times of financial panic in amounts not less than fifty thousand dollars, upon due proof of a deposit of United States bonds. That banks receive no interest on the United States bonds deposited to secure the extraordinary issue of currency. That the legal tender notes be withdrawn as fast as National Bank notes are issued. That nothing in this act shall be construed to authorize any increase of the principal or interest of the public debt of the United States.

Such a currency would be valid and acceptable at all times, and the amount being unlimited, the steadiness of the measure of value would be preserved; that is, the notes would have the same value at all times. Being redeemable, the currency in circulation could not be increased while the monetary requirements of the people remained unchanged, and so the measure of value would not be depreciated; and as there would be nothing to prevent the increase of the currency in circulation when the monetary requirements of the people increased, the measure of value would not be enhanced. The amount of the currency and the requirements of the country would always be commensurate; that is, the currency would increase and diminish according to the natural law of supply and demand.

It should be remembered that men do not desire money, nor use money, nor any of the substitutes for it, except for the transaction of retail trade, the payment of wages, the payment of balances due from one community to another, and as a standard to be used in case of disagreement. The business men have for many years made their purchases upon their own credit, and they thus

issue hundreds of millions of dollars of commercial paper every month. All that concerns the relations of debtor and creditor upon this paper is settled by the aid of the banks and the clearing houses. In all large transactions the people give and receive checks upon the banks.

Whatever be the utility and importance of the precious metals as a medium of exchange, or an equivalent, their utter insufficiency to accomplish the payments of the present day shows that, though they may never be wholly dispensed with in commerce, their efficacy, as means of payment, has been so far transcended by other modes of payment, that nothing can be more fallacious than to regard them as the only model. All past experience shows that in specie times, whenever an excessive demand has been made upon the banks to pay their deposits and to redeem their notes, they were obliged to suspend payment. Therefore it is necessary to provide a currency that at all times will be acceptable to the people. This can be accomplished in no way so well as by a national bank currency, secured by the indebtedness of the United States, which, in turn, is payable at maturity in gold. Banking established on the principle of freedom and competition, would extend the advantages of the credit system into all parts of the country, and thus hasten societary circulation by fostering domestic exchange.

We believe that the third form in which a paper currency can be established is the only safe one, and the only one that will give unity and simplicity, where otherwise there would be diversity and severance.

But whatever system of national finance may be adopted by our nation, if it be sound and comprehensive, it must involve some relations with the domestic exchanges of the country. The internal exchanges of the country are accomplished with a vast amount of unnecessary friction; friction that arises not from the cost of transmitting money, but from want of concert. Exchange, foreign and domestic, is only a mode of setting off debts against debts, and when its operation becomes concentrated in a few hands, the friction of the exchange is small and the business is transacted with facility. A system is needed which only the power of the national government can give. Our domestic exchange involves the adjustment of the debts of those who, though

of the same country, are yet so remote as to require the agency of third parties. As effected by money of account it is almost as simple as the mode of adjustment when the parties live in the same city or town, for both are accomplished by means of banks.

The adjustments of the business men of our cities are made through the banks by means of clearing houses, without either much cost or trouble. The banks of a city, by means of a clearing house, actually become parts of one institution, and the work is done smoothly, where otherwise there would be friction. We refer to this, however, only by way of illustration; for while the banks of our cities put up securities with the officers of the clearing house to protect the solvent against the insolvent banks, a national clearing house, providing a national system, can only be provided for by national legislation.

If the banks in our cities now find themselves compelled, from motives of economy and facility in business, to resort to the processes of a clearing house, the same reasons apply, with far greater force, to the settlements arising out of domestic exchange. Each one of the cities and towns in the nation has its daily maturing claims on all or a portion of the others; each place, leaving out of view individuals, may be said to have a certain claim upon all the others, and to be subject to claims from all.

If the amounts were known it could be stated whether, upon any particular day, the balances were in favor or against any one place with all the others. These settlements are generally based upon commercial transactions which have gone before, and we know that the commodities have been sent from the West to the East, and from the East to the West, and likewise from South to North, and from North to South, and that the drafts and bills of lading exactly represent the amount of transactions, and the market values involved; but we do not know the sum of all these. We do know, however, that in the main the commodities sold and transmitted pay for each other, and that the amounts to be paid are comparatively very small; we know that the debtors in each community or State pay the creditors in that community or State; and we know that it is accomplished by the operations of domestic exchange and the agency of the banks. But this business, as now effected, involves needless expense, time and trouble;

incomparably less, however, than when the old system of State banks existed.

It must be evident that this adjustment between distant cities can be made with more or less facility, according to the number engaged in it. If one thousand are engaged on each side, they would all be claimants, because they all would be corresponding on the subject. If the numbers engaged were reduced from a thousand on each side to one, the complications and expense would be reduced in proportion. To increase the number of banks and bankers is only to increase the confusion and expense, unless they are all governed by a national system, under the supervision and protection of the National Government.

The people engaged in this domestic exchange need a new facility; the banks and bankers who are their agents need it still more; they need an institution which should approximate to the operation of a clearing house.

If any bank or banker in Philadelphia, who discounts or purchases a bill or note payable at any other place, could at once send it to an office of exchange in that city, the books of that office would show each day the claims of Philadelphia upon all the rest of the country; and its correspondence would show the claims of all the rest of the country each day upon Philadelphia; and the same of such an office in every other city. The whole business of domestic exchange might be thus concentrated in every city at one office, in which would be exhibited daily the debts and credits of that city and its dependencies, to and with all others.

It is obvious that offices of domestic exchange thus representing whole cities or districts, and concentrating their debts and credits, could settle their mutual claims with a facility nearly equal to the operations of a local clearing-house. The aggregate indebtedness of the cities, towns and districts each to the other, would be discharged as an aggregate liability. Each bank or banker concerned, would have only to account with their customers according to their relations with each other; amounts due by individuals in Philadelphia to persons in New York would be placed, in Philadelphia, to the credit of those to whom persons in New York were indebted; and so with individuals in New York creditors or debtors of persons in Philadelphia; both classes would make and receive their payments in their own city. The

office proposed would, in connection with the telegraph, in a few hours change the indebtedness between individuals residing in different States, or cities, into indebtedness between parties in the same vicinity, neighbors and customers of the same bank, and well known to each other.

By the agency of offices established for the express purpose of aiding domestic exchange, the government could distribute perfectly, promptly, at the least risk, and with the least expense, to every required point, all the public revenues; and at the same time the domestic exchange arising from commercial operations could be facilitated and economized to the utmost practicable degree.

A public institution designed to regulate and assist the domestic exchanges of the country, with all the ramifications and branches to make it efficient, would be a boon to the industry and the trade of the country, the value of which would be almost beyond estimate. It would need to have a close and systematic connection with the financial system of the United States, that the offices of the public treasury, and the offices of domestic exchange, might operate together, so far as needful, and lend mutual support in every exigency, and that their information might be in common.

This can be done with great effect, without departing from the true limits of a proper system of national finance, under or rather with our system of national banks. It would bring permanently within the power of the general government that control of the currency of the country which the present system of banking made possible. The measures and financial policy directed to this important object might, we fully believe, be so shaped and so managed, as to secure the approval of all the best banks in the country, and still more certainly that of their customers.

An institution designed to regulate and aid the domestic exchanges of the United States, and to accomplish the transmission and distribution of the public revenues free of expense would have to receive its shape and power from the general government.

For its general features we make the following suggestions: A capital subscribed by any or all banks, under the national system; each bank subscribing ten per cent. of its capital. The subscription to remain permanently open to all banks. To have as

many offices as may be needful, one at least in every State, and one in every town of 10,000 inhabitants; no one of which to have power to lend money, to keep deposit accounts, to discount or purchase commercial paper of any description, or any other security. The capital to be strictly applicable to the payment of the balances of domestic exchange, and to afford the requisite facilities for the transmission and distribution of the public revenue.

The office in New York to have the special direction as to the payments of balances between the offices, and as to the transmission and distribution of the public revenue in accordance with the requirements of the proper officers of the treasury. The affiliation of all the offices to be so complete as to make one body of the whole, all property and all liabilities being in common. Each office to receive for collection from the banks every description of paper security payable at a different place from that at which it is received.

The offices to make daily settlements with each other; where this is not practicable, to make them as often as the course of business and the mails will permit. The accounts of the offices, as against each other, to be first balanced, and the difference adjusted or paid. The proceeds of collections to be then distributed among those who had deposited claims for collection, which had been duly paid at other offices. The charge for collection not to exceed half of one per cent., the whole to be under the control of the Secretary of the Treasury. Dividends to be declared every six months.

An institution of this kind would rapidly commend itself to the whole country by its usefulness and economy. It would be perfectly safe, because with a large capital of National bank notes on hand it would at all times be able to make prompt settlement. It would be a mere collector of the debts of others, never a purchaser of any. It could, therefore, never fail but from the dishonesty of its officers, and the capital would be so subdivided, and the accountability so strict, that no serious inroad upon it could occur from fraud or unfaithfulness. It would be purely the servant of the people. It would be no monopoly, for the subscription book would be permanently open to all banks. The national bank notes would not be idle, for the whole stock would be in motion as a medium of payment. It would be truly

national, because an interest in it would be always open to every bank.

To make this national clearing-house useful, it is necessary to have a uniform and free system of banking.

With a system of free banking established as suggested, money of account would be used not only for local purposes but also for domestic exchange, and no more currency could be kept in circulation than trade demanded. We believe that with a high protective tariff, with a perfectly safe currency, and with a comprehensive system of domestic exchange, a return to specie payments would be possible at an early day, and that soon our public indebtedness would be held at home.⁴

THE BLUNDERS OF REFORM.

The problem of getting the right man into the right place of power and responsibility—of securing a government that shall represent the better self, the brighter intelligence of the people,—is one that has not yet been solved on this continent. It is one by whose solution or failure of solution any system of political order must stand or fall. If the experiment whose centennial comes not in 1776 but in 1789, is to be a success, if the American people are not only to be independent as a nation of all foreign governments and powers, but also to perpetuate that independence under the forms of a Federal Republic, as adopted thirteen years later than their Declaration of Independence, then there must be a great reform in the actual working of our political institutions, and that before many years. For it is of no use to deny that the enthusiasm and admiration that were once felt for the methods of our political order are very greatly impaired, if they are not actually vanishing out of our midst. The younger generation especially share but slightly in that enthusiasm and admiration. While they cannot be said to heartily approve of any other existing system, and still less to desire to transplant any other into our midst—while they are not monarchists, nor imperialists, nor even aristocratists, they are not heartily affected

⁴In our remarks upon a National Clearing House we have followed the late Stephen Colwell.

toward our semi-democratic Federal system. Worse than any definite political heresy is the fast-spreading cynicism, which hopes for no good and looks for no improvement,—which looks on this or that evidence of political corruption, not with surprised indignation, but with the indifference that takes these as a thing of course. Even Prof. Lowell, our greatest poet and not the least incisive of our thinkers, who as late as the second series of the *Bigelow Papers* (published during “the late unpleasantness”), was full of hearty enthusiasm for the great experiment of political equality and self-government; now takes up the burden of the nation’s political land moral desolation, and has no word of hope or cheer for a better future.

We cannot write in either this cynical acquiescence of a bad present, or this hopelessness of a better future. It is our conviction that the worst mischiefs of our political life are caused by the want of adaptation between our political machinery and the actual life of the people, and therefore we believe that it is quite within the reach of reformatory plans to correct those mischiefs, and to restore a healthier tone to the whole public life of the nation; and we further believe that not all but some of the worst faults in our political machinery were the outcome of reformatory plans that were ill-advised in their conception, and that now need reconstruction and revision.

The greatest of these mistakes was in the construction of a system of government that makes undue demands upon the time, the attention, the public sympathy of the people. This mistake enters into the Constitution of the United States itself. The authors of that document had not learned the truth that is now a common-place of political science—that the will of the people is often best brought to bear in the management of the government, when it bears indirectly. In the government which furnished them with the main outlines of the new constitution—the government of Great Britain—that principle of indirect influence was very fully illustrated in the relation of the Cabinet to the House of Commons; but they made no attempt to transplant the Parliamentary government to America. Instead of this, they set up an irresponsible but temporary executive, and did not even provide for the appointment of Cabinet officers as his associates in power. They gave him no representation and no seat in Con-

gress ; they only put between him and the popular suffrage, a non-descript body of electors chosen by popular suffrage, and devoid of any permanent place in our political system. They left the possible cases of a dead-lock between the Executive and the Legislative power to adjust themselves, balancing a limited veto power by the power to impeach and remove. And they threw upon the people the responsibility of a frequent and periodical choice, both of the national executive and of the national congress. At the same time, by perpetuating the old colonial system of local legislatures and executives, they left to the people a large number of elections, whose importance is necessarily in the inverse ratio to their number.

The system worked comparatively well throughout the earlier period of our history, for reasons that apply more forcibly to that period than to ours. It was an age in which the interest of the people of all classes in politics was exceedingly lively. Its jural life may be said to have been the sole life that the young Republic possessed. "Eternal vigilance is the price of liberty," is a motto that they could very easily put into practice. They had nothing else to think about. They were hard-working people, but their work was of a steady, plodding sort that gave very little scope to intellect ; and the rapid societary and industrial circulation of our age of factories and railroads was still in the womb of the future. Culture in its independent, unpolitical forms, as yet was not, and its power to draw men away from the contact and turmoil of the world, was unexperienced. So of science. Even ecclesiastical interests were very weak, outside of some few districts of New England. The growth of the churches in the power they now exert over American society, reaches back not fifty years. Politics commanded the intellectual activity and the intellectual interest of the whole nation ; the sort of men that now aspire to eminence in science, in literature, or even in wealth, did then as a rule turn to the political arena as offering the highest rewards to ambition, and the best exercise for their intellectual thews and sinews. And then again the restrictions upon the suffrage, which were still imposed in many States, made sure of its exercise by the class best fitted for the exercise. What was prized as a privilege is less thought of when shared by all.

But the last fifty years have seen a rapid and still progressive

change in all these respects. Other interests, not less absorbing than politics, have arisen among us, and the old-time enthusiasm and devotion to that subject begins to look a little ridiculous. Art, literature, science, religion, have been growing in their command of popular attention with every year, and their gain has been balanced by a loss in the other direction. Above all, our industrial growth, our manifold industrial enterprise and audacity, to say nothing of the rise of the speculating spirit—these have taken away popular attention from the theme that once occupied all attention. To-day our popular life is richer, more varied, more manifold than in that not very remote past, but our institutions are still suited to the old simplicity and uniformity; they still make the very largest demand on the political interest of the mass of the citizens.

Indeed, they now make larger demands upon popular attention. A steady revolution has been going forward with more or less rapidity in every quarter of the Union, in the extension of direct popular influence, and its substitution for that which is indirect. The number of officials appointed by the State executives has been very greatly diminished, and the choice thus taken away from them (especially in the case of State Judges) has been devolved on the people at large. The changes made in the municipal governments of our cities look nearly always in the same direction; and every such change, by diminishing the importance of these executive officers (governors, mayors, etc.,) has lessened the popular interest in their election. Instead of concentrating popular attention on the choice of one man, and vesting the whole responsibility of the *personnel* of the government in him, the people have been distracted with frequent elections, involving the choice of a long list of State, city or county officials. No other country under heaven makes such demands upon the time, the patience, the social discrimination of her citizens; for no other throws the appointing power into the hands of the whole body of voters, and expects them to discharge duties which require great discrimination as to the character of hosts of comparatively obscure people. For partly through the diminution of the importance of the offices, but partly also through the absorption of our people in very different pursuits, it is very rare to find the best class of citizens aspiring to the places of trust which are in the

gift of their fellow citizens. Nor does the office any longer seek the man; there is seldom such a common understanding of public spirit, as gives the community a claim to the services of men who would rather put honor upon the office than receive honor from it. In a community absorbed in the pursuit of private enterprise, it would be little short of farcical to find men of wealth and social position making unitedly such a claim upon the self-sacrifice of one of their fellow citizens, in the way that was not unusual at the beginning of the century. The form of doing this is indeed still kept in use, as being a very seemly and a very handy way of grinding private axes. But except in a few extraordinary cases, where misgovernment has been carried to an extreme that threatened business interests, there is only the form left us.

That there will be any thorough reform in these things without a general and hearty revival of public spirit throughout the land, we do not think possible. From whence such a revival will come is very hard to see. Perhaps some of these days the Christian churches may waken up to the apprehension of the truths that lie spread over every page of their Old Testament, and find that they have other work on hand than the saving of single souls. Perhaps some of our professions or businesses may at last learn that they are neither putting honor upon their work nor getting satisfaction out of it, by treating it as a mere means to make money; and finding it to be a function they possess as members of a vast body and of one another, may come to preach that doctrine to their neighbors. Perhaps we may take to heart the song of some singer, or the word of some thinker sent to be our prophet, and do works meet for repentance, getting rid of our atomic selfishness. But all these are but possibilities.

Still, as we have already said, we regard much of the mischief as arising from the lack of adaptation of our institutions to our people as they are. Even a public-spirited people might very well complain of the demands made upon them by our elective system, and what public spirit is left us is hindered from its due and rightful influence. The reduction of the number of elections by lengthening terms of office, the reduction of the number of persons to be elected by extending the appointing power of the Executive, seem to us the first steps in the right direction. The chief magistrate and the legislature of each state should be the

only persons chosen in the state ; the mayor and the council the only persons chosen in each city ; and in them should be vested the choice of all other officers, executive and judicial. By making the offices more important, they would also be made an object of ambition to a higher class of citizens, and their new importance would help to excite a more lively concern in the electors as to the choice of men. Indeed, it may be laid down as certain, that whatever detracts from the importance of any position in the people's gift, makes it the more accessible to corrupt and inferior men.

We would even go farther ; we would again urge, as a step in this direction, the reconsideration of the status of the state governments, with a view to their reduction to a municipal footing or their abolition. We need a vigorous political life at the nation's very heart, the capital. We need to make its positions posts of the highest honor to all who reach them. Will we ever make the post of member of Congress equal in importance and dignity to that of member of Parliament, while our supreme legislature is deprived of the most important functions that inhere in the latter, and its authority and influence whittled into almost nonentity by the activity of two score of State legislatures ? Till this is changed Congress need not be expected to be very much better or purer than it is ; because no better men will seek its seats, and no greater care will be exercised over their selection.

It is necessary thus to repeat again and again the principle we have in view, because not only is it continually lost sight of, but its very opposite is almost assumed as an axiom by our political reformers. The recent attempts to reform the governments of various States by the adoption of new constitutions—as Mr. Henry Reed very well points out in his article in the *North American Review*—all chiefly turn upon restrictions to the power of the state legislatures. In many cases—as he shows—these attempts at restriction are utterly futile ; no judge, for instance, will go behind the official record to learn whether or not a law on the statute book was passed according to all the forms prescribed by the constitution-makers. It would not be equitable for him to make inquiries on the subject which could not be made by the citizen, who has acted in good faith on the supposition that the statute was of force. But even if these restrictions were successful, they

would do far more harm than good. A citizen who respected himself would not seek a place in a legislature whom the State had solemnly muzzled as a set of biting curs; and the electors, thinking that the legislature was harmless now to do any mischief, would be less careful to seek good representatives. This, we believe, has been the actual course of things under the new constitution of Pennsylvania. The legislature has been anything but an improvement on its predecessors.

Very similar is one of the current arguments against the substitution of a national currency—such as England is soon to adopt for herself—instead of the notes issued by banking corporations. It is said such a currency may be better in the abstract than any issued by the banks; but how can we be sure that its management will always be in the hands of competent and trustworthy men? Are we not giving an immense power into the hands of a set of politicians, who, while better than the average, are not either in intellect or conscience the men to be intrusted with such large discretion? So long as we argue in that way, and act on those arguments, we will never have men of the highest intellect and conscience in the national service. The electors will not be on the alert to find them; they will not seek the office. But if once the choice of such men were to be a choice that should affect the whole commercial and financial status of the nation and its great business centres, the right men would be forthcoming: no one else would have any chance of election.

In fine, our political reform must begin at the other end. We must level up, instead of leveling down. We must concentrate responsibilities, instead of scattering them.

JOHN DYER.

THE SOUTH KENSINGTON MUSEUM.¹

It is now seven-and-thirty years ago that, influenced by the declared opinion of the public, the British Government was in the year 1838 induced to take into serious consideration the Art-edu-

¹ This "Memorandum upon the formation of the South Kensington Museum" was prepared under the direction of Mr. P. Cunliffe Owen, British Commissioner to the Centennial Exhibition, for the use of the Committee having in charge the organization of a Museum of Art in Philadelphia.

cation of the people : in that year a School of Design was established under the then President of the Board of Trade at Somerset House, having for its object "*the training of Designers to improve the patterns and designs used for manufactures.*" The progress of the undertaking at first was very slow, for in the course of twelve years the number of Branch Schools which had been established in the provinces for promoting the same object only amounted to twenty-one. The Exhibition of 1851, however, gave a great impetus to the work, for in that grand exhibition of the art-manufactures of most of the countries of the world, the comparison of British workmanship with the Art-industrial productions of other nations revealed to the Englishman, that although his handywork might well compete with any in point of honest and skillful execution, yet in respect of beauty of design it was far behind that of some other nations. The result was the formation of the present Department of Science and Art under Her Majesty's Committee of Council on Education. It was soon considered necessary to provide a collection of objects illustrating the Art-workmanship of bygone ages, not only as practised in this country, but in all the civilized nations of the earth, to serve as examples in guiding the art-education of the student. And with this view a nucleus of a permanent Museum of Works of Art was formed at Marlborough House, now the residence of H. R. H. the Prince of Wales; the objects there acquired, by means of moneys granted by the State, form part of the important collections in the South Kensington Museum, which is now the central depository of all works of art, pictures, books on Art and Education, engravings, &c., collected by the State to serve in aid of the Art-education of the public.

The following is an extract from the Introduction to the first Catalogue of the Collection; it shows the sum expended, and the various classes of objects purchased, with the reasons for their selection :

"The formation of a Museum of Manufacture of a high order of excellence in Design, or of rare skill in Art workmanship, had long been considered desirable, as well as for the use of Schools of Ornamental Art as for the improvement of the public taste in Design; and the Great Exhibition of 1851 affording a favorable opportunity for obtaining suitable specimens, the Board of Trade requested a Committee to recommend articles for purchase, and

subsequently to prepare a Catalogue, which should set forth the prices of the various articles, and the reasons for purchase, together with any other particulars it might be desirable to know in the use and study of the Collection.

"2. The funds which the Treasury allowed for this purpose were limited to 5,000*l.*, of which 4,470*l.* 16*s.* 5*d.*, have been expended in the following proportions:

	£	s.	d.
Articles exhibited on the Foreign Side of the Exhibition...	2,075	9	0
Articles exhibited on the British Side of the Exhibition.....	893	18	11
Articles exhibited by the East India Company.....	1,501	9	6
	£4,470 16 5		

"3. Apportioning this amount to large groups of Manufactures, the expenditure in each will be as follows, the prices of foreign articles being exclusive of Customs' dues, &c.:—

	£	s.	d.
Woven Fabrics.....	1,080	0	4
Metal Works.....	1,426	15	6
Enamels.....	844	12	0
Ceramic Manufactures.....	348	6	7
Wood Carvings and Furniture.....	771	2	0

"4. As a first principle in making the selections, the Committee felt it to be their duty to discard any predilections they might have for particular *styles* of ornament, and to choose whatever appeared especially meritorious or useful, if it came within the limits of the means at their disposal, without reference to the style of ornament which had been adopted. The Collection accordingly possesses specimens of many European and several Asiatic styles. Yet each specimen has been selected for its merits in exemplifying some right principle of construction or of ornament, or some feature of workmanship to which it appeared desirable that the attention of our Students and Manufacturers should be directed.

"5. Most of the examples, indeed, in the opinion of the Committee, have a mixed character. Some, like most of those from the East, illustrate correct principles of ornament, but are of rude workmanship; whilst others, chiefly European specimens, show superior skill in workmanship, but are often defective in the principles of their design. Thus, the Paris shawl, by Duche aîné (W 120,) was rewarded by the Jurors as a triumph of manufacture; but its direct imitations of natural objects appear to the Committee to be of very inferior design to the ruder scarfs of Tunis, or the kinkhobs of Ahmedabad.

"6. An attempt has been made in the Catalogue to indicate the more salient points of merit and defect in every article as far as space would permit. This of necessity has been done imperfectly, but we look forward to many opportunities occurring when

the features of the several purchases may be fully and systematically explained.

"7. Notwithstanding the indifference to principles of Ornamental Art, which is too prevalent in the present age—and even the variety of style and character in the works in this Collection affords proof of such indifference—there are signs that the existence of laws and principles in Ornamental Art, as in every branch of human science, is beginning to be recognized. Indeed, without a recognition of them, we feel that Schools of Art can make no progress. Collections of Art will, we think, be most instrumental in helping to form a general belief in true principles. It is by means of such Collections that we may hope to create a band of practical artists, competent to teach the principles of Ornamental Art, and to prove by their own works the soundness of their teaching.

"8. In forming this Collection, the Committee looked to its becoming the nucleus of a Museum of Manufactures, which may have its connections throughout the whole country, and help to make our Schools of Art as practical in their working as those of France and Germany.

"9. Already, with the desire to enable Manufacturers and Students who may be prevented from consulting the Collection to participate in the advantages of it, the Board of Trade has authorized the preparation of Colored Lithographs of some of the Examples to illustrate the Catalogue; and this decision has led to the formation of a Class of Female Students for practising the art of Chromo-lithography, who, whilst thus aiding the production of a useful work, are practically acquiring the knowledge of an art peculiarly suitable to them, and for which there is an increasing public demand.

(Signed)

HENRY COLE.

OWEN JONES.

RICHARD REDGRAVE."

17th May, 1852.

THE COLLECTIONS.

The Collections at South Kensington Museum now comprise—

1. Objects of Ornamental Art as applied to Manufactures.
2. The National Art Library.
3. British Pictures, Sculptures and Engravings.
4. The Educational Library, with appliances and models for Scholastic Education.
5. Materials and Models for Building and Construction.
6. Substances used for Food.
7. Reproduction, by means of Casting, Electrotpe, and Photography, of objects displaying the Art-manufactures of all nations.
8. Naval Models.

These collections have been acquired by means of sums of money granted from year to year by the Parliament. This system of purchase by the State was commenced in 1838; a sum of 10,000*l.* was voted in 1840 for the purchase of examples of Art for the Schools of Design; 5,000*l.* was granted by Parliament for the acquisition of examples of Art from the Exhibition of 1851; in 1855, 20,000*l.* for the purchase of specimens; and up to the year 1860, 50,000*l.* had been expended by the State for these collections, in securing specimens, with the view of exhibiting the efforts of the artist in combination with the workman, not only in England but in foreign nations, dating from the period of the revival of the arts in Europe. Since 1860 the scope of the Museum has been much extended, and reproductions of some of the more important monuments of ancient art have been added to its collections, and the amounts voted by Parliament have been proportionately increased.

The Museum of Ornamental Art was established in 1852, when, by permission of Her Majesty the Queen, a suite of rooms in Marlborough House was appropriated to the reception of the various art-manufactures, comprising pottery, glass, metal-working, furniture, textile fabrics, enamels, etc. This Museum remained open to the public until February, 1857, when it was closed for the removing of the collection to the Iron Building at South Kensington, which had been presented to the Government by H. M. Commissioners for 1851. In 1856, a sum of 10,000*l.* was voted by Parliament for removal of schools. This important division of the Museum contains at present a collection of Ancient, Mediæval, and Modern Art-workmanship, of various countries, acquired by purchase, gift, and bequest, comprising upwards of 20,000 objects, in addition to a grand collection of reproductions of Art-objects in other National Collections, which have been obtained by the electrotype process, or by castings in plaster, and which are deemed to be of great importance as models for guiding the Art-student.

The National Art Library contains about 33,000 volumes. This collection of books differs from most of our national libraries, inasmuch as it has been chiefly acquired by moneys granted by the State for the special purpose of Art-teaching, and the books have nearly all been selected by competent judges ap-

pointed by the Committee of Council on Education. The Art Library also contains 10,000 drawings, 23,000 engravings, chiefly of ornament, and 36,000 photographs.

The Collection of British Pictures at South Kensington was commenced by the gift of Mr. Sheepshanks, who, in presenting his pictures to the nation, stipulated that they should be kept in a suitable building in the immediate neighborhood of Kensington. The value of this gift, which comprises some of the choicest pictures of the British School, was then estimated at 53,000*l.*, but it is now worth a considerably larger sum. This gift was followed by other donations of Pictures, and the galleries now contain 585 oil paintings and 1,005 water-color drawings, specimens of the works of the best British Masters, nearly all contributed by private individuals for the advancement of the public Art-education of this country.

The Collections of Sculpture consist chiefly of decorative sculpture of the Renaissance period in marble, stone, and terra cotta, including numerous specimens of the glazed terra cotta of the 15th century, known as Della Robbia ware.

The Educational Collection was begun by the Society of Arts, and first exhibited in St. Martin's Hall in 1854, after which exhibition numerous objects were presented to the Government to form the nucleus of an Educational Museum. These were added to the other collections at the South Kensington Museum, and this collection has now, by means of the voluntary contributions of the publishers of Educational Works and by the aid of the State, become a very important branch of the South Kensington Museum, seeing that its library contains upwards of 20,000 volumes of Educational Books, and the collection of Models and appliances for educational purposes numbers some thousands of specimens.

Materials for Building and Construction.—The nucleus of this collection was formed partly by gifts and purchases from the Exhibition of 1851 and from the Paris Exhibition of 1855. It has since been greatly increased and chiefly maintained by the voluntary contributions of building contrivances offered for exhibition by the inventors of the same. It comprises samples of building stones, cements, terra cottas, bricks, fire-proof floors, ornamental tiles, enamelled slate, specimens of woods for construction, etc.

Substances used for Food.—The Food Museum was first estab-

lished and became part of the South Kensington Museum in 1857: it is arranged with the express object of teaching the nature and sources of food, representing the chemical composition of the various substances used as food, and the natural sources from which they have been obtained. This collection has lately been removed to the Bethnal Green Branch Museum.

Reproductions by Electrotpe, by Casting, and by Photography, of historical Art-monuments and of Art-objects existing in the collections of other countries, have been obtained and used, not only for exhibition in the South Kensington Museum, but to furnish models for the use of students in the 2085 Schools of Art in the provinces. Many such objects, of great educational value, have been secured by the Convention for International Exchange of Reproductions of Art-objects, made by some of the leading Powers of Europe at the Paris Exhibition of 1867.

Naval Models.—In the year 1864 the collection of the Naval Models belonging to the Admiralty was removed from Somerset House to South Kensington. This collection has, for educational purposes, since been transferred to the Royal Naval School at Greenwich; but during the time of its remaining in the galleries secured for its exhibition by the authorities at South Kensington, so many acquisitions were made that the collection now belonging to the nation exhibited at South Kensington has become very important, especially in models and appliances for modern warfare.

Loans from Private Collectors.—In addition to those important collections of Art-objects acquired by the State, the South Kensington Museum contains in one of its courts, especially devoted for the service, a large collection of Art-objects on loan from various private owners, who desire to co-operate with the Government in carrying on the Art-education of the public. Objects lent for exhibition are accepted on the understanding that they remain for a period of not less than six months; and although every care that the State can command is guaranteed for such deposits, the authorities of the Museum do not hold themselves responsible for loss or damage. Numerous special Loan Exhibitions of great importance have also been held, the last being that of Enamels on Metal, opened in June, 1874.

Circulation.—From the first formation of the Museum Collec-

tions, a system of circulation of selected objects for exhibition in aid of Schools of Art in the provinces has been in force. Since 1864 this system has been much extended; contributions have been made to 245 Exhibitions, and the number of ascertained visitors to these has exceeded five millions. The Museum, as a general storehouse for objects which can be sent to schools of Science and Art, has, under the term 'circulation,' three distinct classes of objects, which are distributed under the following heads:

1. Examples furnished to Schools of Art and Science for stated periods for the purpose of study.
2. Original art objects, paintings, electrotype reproductions, etc., for exhibition in connection with Schools of Art.
3. Circulation of reproductions by various processes, electrotype, photography, etching, chromo-lithography, etc., sent on deposit loan, to be retained by the schools for a period of one or more years.

COST OF THE COLLECTIONS IN THE MUSEUM UP TO THE YEAR 1874.

Although these valuable collections have been very much enriched and increased by the liberal donations and bequests of private collectors, their accumulation has been mainly achieved by monetary grants from the State, the amount of which has for several years exceeded an average of 22,000*l.* sterling per annum. The total cost to the nation of the South Kensington Museum, including Administration, Building, and Collections, to the 31st of March, 1874, is stated in a Parliamentary paper to amount to 1,191,709*l.* 17*s.* 4*d.* Of this, the sum of 281,672*l.* 6*s.* 1*d.* has been applied to the purchase of the Collections. The following Table gives the cost of each class of objects in the Museum:

	<i>£.</i>	<i>s.</i>	<i>d.</i>
Sculpture (Marble, stone, terra cotta, original casts in wax and stucco,).....	19,857	0	11
Mosaics.....	2,129	4	0
Carvings in ivory, bone and horn.....	18,435	8	6
Woodwork (Carvings, furniture, and frames, etc.).....	24,659	11	4
Metal work (Iron, steel, bronze, etc.).....	17,896	12	11
Coins, Medals, Medallions, etc.	1,907	17	11
Arms and Armor.....	3,025	15	4
Silversmiths' work.....	13,374	5	3
Jewelry and Goldsmiths' work.....	15,995	10	6
Enamels on metal.....	17,017	5	2
Earthenware and stoneware.....	22,796	18	11
Porcelain.....	6,898	3	11

	£.	s.	d.
Glass vessels, etc.....	4,990	2	3
Painted and Stained Glass.....	1,835	1	11
Leather-work and Book-binding.....	1,022	12	3
Textiles, including embroidery.....	6,663	9	8
Lace.....	715	7	9
Musical instruments.....	3,802	15	0
Paintings in oil, etc.....	4,709	0	7
Water-color drawings, miniatures, etc.....	4,806	13	3
Meymar Collection of Arabian Art, etc.....	2,261	0	0
Reproductions (Plaster casts, Electrotypes, etc).....	30,220	18	1
Books in Art Library.....	23,061	7	10
Prints and Drawings in Art Library.....	13,281	16	10
Photographs in Art Library.....	2,299	2	3
Educational and Scientific collections.....	13,307	8	9
Construction and building materials.....	2,695	8	1
Marine model collections, etc.....	2,006	6	1

Total cost of collections to 31 March, 1874.....£281,672 6 1

Number of Objects acquired by the Art Division of the South Kensington Museum, from its formation in 1852, to the close of 1874:—

Year.	No. of Objects.	Year.	No. of Objects.
1852.....	1064	1864.....	1416
1853.....	1148	1865.....	792
1854.....	436	1866.....	344
1855.....	1387	1867.....	338
1856.....	816	1868.....	1158
1857.....	813	1869.....	1833
1858.....	257	1870.....	1503
1859.....	879	1871.....	1764
1860.....	643	1872.....	1640
1861.....	548	1873.....	1632
1862.....	268	1874.....	1439
1863.....	1139		

REGULATIONS FOR VISITORS.

The Museum is opened daily, *Free* on Mondays, Tuesdays, and Saturdays, from 10 a. m. till 10 p. m. The *Students' Days* are Wednesdays, Thursdays, and Fridays, when the public are admitted on payment of 6d. each person, from 10 a. m. to 6 p. m.

Tickets of Admission to the Museum, including admission to the Art Library and Educational Reading-room, and also to the Branch Museum at Bethnal Green, are issued at the following rates: *Weekly*, 6d.; *monthly*, 1s. 6d.; *quarterly*, 3s.; *half-yearly*, 6s.; *yearly*, 10s. *Yearly tickets* are also issued to any school at 1l., which will admit all the pupils of such schools on all *Students' Days*. To be obtained at the Catalogue Sale-stall of the Museum.

ATTENDANCE AT THE SOUTH KENSINGTON MUSEUM.

1875.	FREE DAYS.		Students' Days.	TOTALS.	Corresponding Numbers in			
	Morning	Evening.			1874.	1873.	1872.	1871.
January.....	37,406	16,219	8,182	61,807	65,380	67,705	91,199	6,9999
February.....	28,393	14,504	7,131	50,028	52,500	47,793	147,609	71,742
March.....	59,831	20,235	6,863	86,929	63,329	67,562	138,514	75,449
April.....	35,800	17,004	10,453	63,257	106,831	89,422	165,889	113,574
May.....	52,140	19,566	9,601	81,247	97,937	62,100	91,152	103,279
June.....	33,157	16,075	17,204	66,436	92,368	85,145	75,748	71,631
July.....	44,837	19,358	14,987	79,182	73,470	70,585	78,222	81,872
August.....	49,594	22,297	9,109	81,000	98,256	77,153	88,459	76,384
September.....	.....	.....	.....	.....	80,917	80,371	75,720	75,992
October.....	.....	.....	.....	.....	75,622	65,497	66,375	69,775
November.....	.....	.....	.....	.....	50,619	58,134	53,460	48,320
December.....	.....	.....	.....	.....	61,898	87,570	83,721	81,312
Totals.....	341,158	145,198	83,530	569,886	914,127	859,037	1,156,068	939,399

Total since the opening of the Museum on the 22d of June, 1857, 14,510,114.

COMPARISON OF THE YEARLY NUMBER OF VISITORS.

YEARS.	NUMBER OF VISITORS.			YEARS.	NUMBER OF VISITORS.		
	Morning.	Evening.	Total.		Morning.	Evening.	Total.
1854	104,823	At Marlboro House.	104,823	1865	444,803	248,151	692,954
1855	78,427		78,427	1866	515,674	240,401	756,075
1856	111,768		111,768	1867	442,877	203,639	646,516
1857	120,371		147,020	1868	599,143	281,933	881,076
1858	237,272		219,016	1869	768,765	274,880	1,043,645
1859	263,088		212,277	1870	626,387	271,209	1,044,849
1860	347,596		263,100	1871	690,128	249,201	939,329
1861	379,156		225,394	1872	701,010	315,314	1,156,068
1862	849,192		392,177	1873	411,732	247,305	859,037
1863	463,504		263,411	1874	642,880	271,247	914,127
1864	473,980		239,089				

NEW BOOKS.

THE MOSAIC ACCOUNT OF CREATION, The Miracle of To-day.
By Charles B. Warring. New York: J. W. Schermerhorn & Co., 14 Bond street.

It must be accepted as a good sign that the controversy between science and religion has lost nearly all its bitterness, and that both the combatants seem to be preparing for a treaty of peace, which will secure their future friendly co-operation. The views which Dr. LeConte so ably inculcated in his late address before the American Association, must command the approval of every earnest truth-seeker, for their catholic recognition of the equal importance of the æsthetic and the intellectual sides of our nature. When such recognition becomes general, specialists

will cease to attempt generalizations for which they are not fitted, and theorizers will cease to dogmatize.

Mr. Warring discusses his subject with great earnestness and becoming modesty. While avowing himself a firm believer in Biblical revelation, he claims no exemption from scientific criticism. He accepts the narrative of Genesis as literally true, regarding the "days" as days of approval terminating successive indefinite periods of creative development. There will, naturally, be great differences of opinion as to the accuracy and value of his interpretations, but their ingenuity and sincerity are praiseworthy. The points presented in the following passages are especially well taken.

"A class of scientists of distinguished ability have reached a conclusion to their inquiries into the origin of things, in the proposition that 'all evolution' is due to a Power Unknowable, a proposition which they appear to regard as an important outstretch of the human mind. I can understand that one can positively and truly assert that this Power is unknown to *him*, or that, on the authority of a person who has thoroughly examined and comprehended this Power and the capacity of the human mind, he may receive as a matter of faith the assertion that this First Cause is 'Unknowable,' but how any man can assert this of his own authority, I cannot conceive. The very affirmation implies the most exhaustive knowledge, and thus destroys itself.

... The only question that concerns us is, can this Power make himself known to us? Does he interest himself in his creatures? Does he regard their welfare? If so, can he let us know it? I can communicate my wishes to my fellows; even the brutes have, in a limited degree, the same faculty. Has this Unknown Power less ability?"—*Preface, pp. 7, 8.*

THE RECENT ORIGIN OF MAN, As Illustrated by Geology, and the Modern Science of Prehistoric Archæology. By James C. Southall. Illustrated. Pp. 606. Royal 8vo. Philadelphia, J. B. Lippincott & Co.

Mr. Southall has not laid to heart the maxim of the wise Bæotian that "the half is more than the whole." He has given us in these very closely printed six hundred pages, a controversial work erected after the proportions usual in theological polemics in the sixteenth century, but long abandoned even by the theologians.

Vita brevis one must say *apropos* of such a book, and recall the question put by Jerome, "Who on earth has ever read as much as Origen has written?" Mr. Southall introduces all sorts of extraneous matters that he had much better have omitted. All in the first seven chapters that he should have said, might have been compressed into one chapter shorter than any of them. And then

when he really buckles to his work in the later chapters, he goes over the whole ground of every subject *ab ovo*, putting his readers in possession, not of the general outline of the facts that form the basis of dispute, but of the very details. His work is a repository of all things known and alleged on the subject—very useful to any one that wishes to master the subject in its entirety, but not likely to prove readable to the much larger classes who either know much more than our author assumes, or care to know much less than he would teach them.

We say this with regret, because although not passionately addicted to either side of the dispute, and not at all persuaded that any very fearful consequences to Christian theology would arise from the establishment of the thesis Mr. Southall assails, we do believe that the processes of scientific ratiocination by which that thesis was reached have been anything but scientifically severe and accurate. That the earliest history begins something less than three thousand years before the Christian era, and that it finds already on the stage some nations in a state of civilization and others in a state of barbarism; that all beyond that limit is uncertain in the largest sense of the word, so far as archæology can construct that past from existing remains; that the attempts to draw sharp lines of distinction between the stone age of the Dolmens and Tumuli, and the metallic ages which followed them, is untenable in the face of the evidence furnished by archæology itself; that the lake-dwellers instead of belonging to a dim past, distant by millenniums from the beginning of history, continued to exist till far on in the historical period; that the inferences drawn from the bones found in caves and under gravel drifts, are open to grave objections to the calculations drawn from the time required for superincumbent deposits;—these are a few of the main positions maintained in this book. He regards all the prehistoric remains found in Europe as the work of the Ugrian Tartars, whom the Aryan races found in possession of the whole continent, and who are in later days represented by the Rhaetians, Etruscans or Raseni, Lapps, Finns, Livs and Letts. Mr. Southall makes no pretense of writing in a judicial spirit. The ardor and flash of a true Virginian temper enlivens his pages, and gives variety to what might else be dry discussion.

His own conviction is that the race originated at about the era fixed by the Mosaic chronology, in a state of civilization; that all mankind have sprung from a single stock; that barbarism marks degeneracy from the original type, instead of being a perpetuation of an earlier stage shared by all; that the moderately civilized and not the barbarian races are the representatives of the earliest type of humanity.

Much of his book will have the interest of novelty for the great mass of readers. The light cast by modern investigations upon

the earlier outline and formation of continents, especially on the existence of a vast mediterranean sea stretching from the Euxine to the Gulf of Obi in Siberia, and covering the vast salt deserts of Chinese Tartary almost to the frontiers of that empire, corresponding as it does to the statements of earlier geographers, helps us to see why vast changes have taken place in the temperature of different localities, through the sudden removal of the modifying element of water from one locality, and its transfer to another. So again, to come closer home, the early ethnographic changes on our own continent, the destruction of one race after another, leaving at last the Aztec and the Indian for the European invader to overcome, give emphasis to the statement that no race has ever yet succeeded in perpetuating itself on American soil, and whether the European race will do so is problematical.

That Mr. Southall's book will serve the purpose he has in view is exceedingly doubtful. Its defects as a book are very much in its way. But it is well for the progress of archæology that there should be such a vigorous and detailed criticism of supposed results accessible to all.

ANCIENT HISTORY FROM THE MONUMENTS.

- I. **EGYPT** from the Earliest Times to C. C. 300. By S. Birch, LL. D. Pp. 202. 12 mo. New York: Scribner, Armstrong & Co.
- II. **ASSYRIA** from the Earliest Times to the Fall of Nineveh. By George Smith, of the Department of Oriental Antiquities in the British Museum. Pp. 202. 12mo. Same publishers.
- III. **PERSIA** from the Earliest Period to the Arab Conquest. By W. S. W. Vaux, M. A., F. R. S. Pp. 203. 12mo. Same publishers.

These three handy-books are the offspring of the Democratic age of literature. They are written by men each of the first rank in the special line of historical study to which the books belong, by men who have already discussed the same themes in works of much greater bulk and diffuseness, but who have here addressed themselves to the preparation of popular summaries of what is definitely known on these topics. Fifty, nay thirty years ago, it would have been thought unworthy of scholars of such standing to prepare such books, but a truer feeling for the relation of the advance of knowledge in all its branches to the advance of the people now prevails in general literature, thanks to the good example set by scientific men.

Mr. Birch's work is the production of a cautious and conservative Egyptologist, and will not greatly shock the nerves of those who think that men are to be saved by a faith in Hebrew chronology: He puts the starting point of Egyptian history—the reign of Menes—at 3000 B. C.; whereas Bunsen has

given us a translation of the Lord's Prayer into the Egyptian that was spoken 5000 B. C. In other words, while very properly accepting the Egyptian chronology as that which stretches the farthest back into the ages that are elsewhere pre-historic, he yet assumes but a moderate length for even it.

Considered simply as a work of history, Mr. Birch's book is hardly a success. His prolonged researches among inscriptions and papyri seem to have chilled his imagination; he does not vividly and sympathetically depict the life of the great population that once swarmed in the Nile valley. To be sure, the record of dynasties and their royal doings must always be the easiest and the chief thing to write of in Egyptian history, and to get behind the dynastic record, to see what those pictures and tombs tell us indirectly, is both difficult and hazardous. But till it is done, as in some degree it has already been done, we have no history of Egypt in any proper sense.

Mr. Smith's work on Assyria is, we think, a better piece of historical work, though drawn from far scantier materials. The great Shemitic Empire of the upper Tigris has a history that extends from 1820 to 607 B. C., although its earlier portion is exceedingly obscure, and even before it began the Akkadian empire of Babylon dominated the valley of the great rivers. The ethnological relation of the country to Judea, and the resemblance of the Assyrian traditions to the Mosaic records of the Creation and the Deluge, as well as the part played by Nineveh in the history of Judea, and the notices in the prophetic books, give a decided interest to the whole story. So much light has recently been cast on the matter by the decipherment of inscriptions, that it is forgotten how much was already known from Greek authorities. Marcus Niebuhr, son of the historian of Rome, has written a history of the Empire from purely classical sources, and the coincidence of the results thus reached with those obtained from the monuments is very striking. For instance, the story of the flood, whose decipherment first brought Mr. Smith's name into notice, is substantially the same in both, and Herr Niebuhr pronounces that in the Mosaic books we have the great central current of Shemitic tradition, while in the Assyrian version that current is mingled with extraneous elements. This he shows by a careful analysis of the facts,

Mr. Smith is a vigorous and very interesting writer, and one who sees not merely the single fact, but its bearing upon the State system of Eastern Asia. He has an Englishman's political instinct, and an English conservatism and respect for the Bible.

Mr. Vaux's work on Persia should be of warm interest to us, their Aryan brethren. But it is not in the strict sense a "history from the monuments." The monuments of Persian greatness are very scanty; the literary records are comparatively

abundant, from the Zendavesta downward. We cannot think that Mr. Vaux has made the best use of his materials. He has no higher model of history than Gibbon, and we get from his book no adequate idea of the people, their relation to other Aryan races, their remarkable creed and its curious transformations, their marked character in contrast to the Turanian races on one side and the Shemitic on the other. Still he has given a very useful and clearly written manual of the great outlines of the history, and one that will offend no popular prejudices. He accepts even the Book of Daniel as historical.

EPOCHS OF HISTORY: IV. THE HOUSES OF LANCASTER AND YORK, with the Conquest and Loss of France. By James Gairdner. Pp. 262, 12mo., with five maps.

V. THE FRENCH REVOLUTION and the First Empire: An Historical Sketch. By William O'Connor Morris. With an Appendix upon the Bibliography of the Subject, and a Course of Study, by President White, of Cornell University.

In these two volumes of the series edited by Mr. Morris, are discussed what are perhaps the two most difficult periods embraced in the original plan of the series. The York and Lancaster period, especially in its concluding struggle—the War of the Roses—is a “confusion worse confounded,” in which the effort to discern a purpose and a meaning under the movement of events, is simply barren and wearisome. We turn away from the public records to the contemporary picture of English family life and social interests given in the *Paston Letters*, with a feeling of relief, and a sense of having discovered the clue to the secret—how a country could have gone through such a chaos, and yet survived and preserved its social morality. Mr. Gairdner, the editor of the last, best edition of those *Letters*, has given much attention to the period they represent. He has, we believe, been employed in the Rolls’ office, in editing some of the records of that age. He is as familiar with its history as the human mind can become with anything that has not right reason as its formative and normative principle. And he has given us a popular record of its transactions, which has at the same time the merits of a work of original authority. He depicts very graphically the manifold confusion of the reign of Richard II., the one English king whom Shakespeare heartily loved, and sympathized with in misfortune; the vigorous and successful rule of Henry IV. and Henry V., and the French wars; the confusions that followed till Bosworth put the English crown on a Tudor head. He always bears in mind that mediæval England shared in the intellectual movement of Latin Christendom, and that she was a part of the State system of Europe, under the nominal headship of the Holy

Roman Empire. He tells of the life of the people on all its sides, and leaves a clear and complete impression upon his reader's mind.

The French Revolution is a difficult theme for a brief manual for exactly the opposite reasons. Its meaning and its importance, even in the early days of its bloody phantasmagoria, is so manifold and clear, that the difficulty is that of omission. Its worst days were days of such display of greatness of character and resolute adherence to principle—even if mistaken—that the light of heaven falls athwart blackness as of the pit. The soldier's empire that grew out of it—the grand personality of the man who embodied Democratic aspirations and ruled in the sense of the people—the closing struggle between *le grande peuple* and the rest of Europe—every stage of the great drama is worthy of a Shakespeare. Its earlier scenes have found one in Carlyle.

Mr. Morris's narrative is simple and direct. He writes, of course, as an Englishman, on a subject on which English and American judgments do not quite coincide, and on some points he only sees one side where there are certainly two. He does not understand the Continental system and its economical results for Europe, and its far-reaching consequences for the world in transferring the leadership in the practical arts from empiricism to the pure sciences. But on the whole he is eminently just and fair, and the summing up in regard to Waterloo is a fine piece of judicial opinion.

Both this and the series of ANCIENT HISTORY FROM THE MONUMENTS, issued by the same publishers, are very admirably printed by a Philadelphia house.

BOOKS RECEIVED.

Bible Commentary. Vol. V. Isaiah, Jeremiah, and Lamentations. According to the Authorized Version (1611). By Bishops and other Clergy of the Anglican Church. Edited by F. C. Cooke, M. A. Price \$5.00. New York: Scribner, Armstrong & Co.

Ancient History from the Monuments. I. Egypt. From the earliest times to B. C. 300. By S. Birch, LL. D. II. Assyria. From the earliest times to the fall of Nineveh. By George Smith, of the British Museum. III. Persia. From the earliest period to the Arab Conquest. By W. S. W. Vaux, M. A. Each volume handsomely illustrated. Small 12mo, Cloth 1.00. New York: Scribner, Armstrong & Co.

Proceedings of the Seventh Annual Meeting of the National Board of Trade, held in Philadelphia, June, 1875. Chicago: Knight & Leonard, Printers.

The History of Co-operation in England, its literature, and its advocates. By George Jacob Holyoake. Vol. I. The Pioneer Period—1812 to 1844. Philadelphia: J. B. Lippincott & Co., 1875.

Brigadier Frederick. A Novel. By Erckmann-Chatrion. No. 48, Library of Choice Novels. 50 cents. New York: D. Appleton & Co.

THE
PENN MONTHLY.

DECEMBER, 1875.

THE MONTH.

THE Bonapartist cause has not been advanced among thoughtful Frenchmen by the recent performance, at Ajaccio, of its chief representative. Never famous for prudence, M. Rouher has been this time more reckless than usual and his speech is calculated to do harm rather than good to the faction whose views it so intemperately expressed. Coming, too, immediately after the calm and statesmanlike utterances of M. Thiers, this vehement harangue must have fallen ominously upon French ears. No good could come of such a speech. Bonapartists need not to be converted and violent attacks upon their enemies will not swell their ranks. There ought to be, naturally, more joy in the camp of Napoleon the IV. over the repentant or converted radical than over ninety and nine men like M. Rouher. It is only through a change of sentiment among those who control and choose the Assembly and the Government that the Bonapartists can expect to return to permanent power; and wise politicians, one would think, would avail themselves of other means than those which the late Prime Minister thinks effective. Every speech like this one at Ajaccio must set men thinking of the risk of exchanging the ills they have under the doubtful government of McMahan for those which they would have reason to anticipate under a system managed by such partisans as M. Rouher. M. Thiers, on the other hand, accepts the situation and urges his countrymen to maintain the present status, even if it be not exactly what all

could wish, because it gives them peace and security—himself setting them a very honorable example. Here we have the statesman contrasted with the politician. The one would maintain, the other overthrow, this preserve, that destroy. Between the two, thoughtful Frenchmen will not long hesitate which advice to choose. In fact the Bonapartist party has the misfortune to possess no such minds among its counselors as were to be found in the immediate circle of the Third Napoleon during the first years of his reign. De Morny and the rest left no successors, and with such advocates as Rouher and such advisers as his mother, the Fourth enters the contest for a crown with the slimmest prospects of success.

THE English papers continue to teem with comments upon the recent maritime disasters, and the dissatisfaction with the Admiralty has been intensified by the unfortunate circular with regard to the surrender of fugitive slaves. Exactly how the government made such a slip as the promulgation of that famous order seems to have been, is not fully explained, but the publication alone did it all the damage possible. Of course the order has been suspended in deference to the popular outcry—another instance, by the way, of the peculiar sensitiveness of the British Government to public opinion—but the unfortunate Mr. Ward Hunt is likely to have rather a disagreeable time of it when Parliament meets. The *Tribune* correspondent mentions a joke which expresses, as he says, volumes in a phrase. "The Navy estimates" are now called "the Sinking Fund."

THE Prince of Wales has reached Bombay. English letters give us some insight into the preparations which have been made to receive him, and have fortified us in a measure for the accounts which the correspondents—notably Dr. Russell—will give us of his reception. All, however, seems not to have been peace or loveliness, and the course of Lord Northbrook's preparations has certainly not run smooth. In his efforts to collect the native princes together to receive the Prince he has found one, at least, hard to move. His Highness, the Nizam of Hyderabad, is a gentle youth of eight years, pleasantly described as "scrofulous" and "sickly." The slightest fatigue or exposure always makes

him ill, and his royal legs are of such a weak and unreliable character that they decline to perform the usual office, and are of little or no service to him. The interesting youth is, moreover, so accustomed to the society of his royal mother and grandmother, that it was thought impossible to separate them, and here rose an exceeding difficulty. The first of those ladies is ill with "scrofulous tumors," the second "crippled by rheumatism," and both having never traveled at all, could not think of the journey to Bombay without unutterable terror. How to take the whole of this highly scrofulous and interesting family, or how to separate individuals bound by so many kindred ties and diseases, was the problem which at last accounts was agitating the Baron Pucks of Hyderabad, while the other alternative of allowing the Prince of Wales to arrive without the privilege of a greeting from the weak-legged Nizam, seemed to their well regulated minds too shocking a thing to be thought of. How they have settled this matter we must wait to learn, but it is positively painful to think of them as "absorbed" for weeks by a question of "*la haute politique*"—almost as important as those which made so much that was famous in the history of the Grand-Duchy of Gerolstein.

THE Pandora has come back with tidings from the Alert and Discovery, Captain Young having chosen rather to return and winter at home than in the Arctic ice. Doubtless he has done wisely, for his ship had a famous run and accomplished much in a little time. The letters of Captain Nares speak of the season as a very open one, and are full of hope and good spirits. They are the last that we shall have from his party for many a day, as they are now locked in the ice of a polar winter, patiently waiting for the two or three months of daylight next year in which to solve the vexed question of the Pole. At almost the same time the voice of Mr. Stanley comes to us from a region almost as mysterious. He has reached the great Nyanza after a journey of intense suffering and constant danger. His letters are brief but graphic, and full of a romantic interest, written as they were in the very heart of Africa. He, too, is full of hope and expectation, with his hand almost on the mysteries that have so long lain hidden from the world; and thus in the two most difficult fields of adventure, the energy and pluck of the Anglo-Saxon race are

unlocking the secrets that have defied mankind from the beginning.

As we go to press a warlike rumor comes from the East. Russia and Austria, it says, are about to seize the disaffected Turkish provinces, the former the Danubian principalities and the latter Herzegovina and her neighbors. England, says the same dispatch, will then at once take possession of Egypt and Crete, and a fleet has been ordered to the Mediterranean. This is all mere rumor, and before this is printed may be proved to have been groundless, but there is no doubt a chance that just such events as these may occur. Russia and Austria, however, are in a better position to carry out their part of it than England. The Sultan, too, is one man and the Khedive another, and Egypt is by no means Turkey. Necessary as the former country might be to Great Britain under such circumstances, it is now neither ripe nor rotten, nor ready, as it once was, to fall into her hands. If she wants it she must go and take it, and there might be some difficulty about the result. Such a war as this doubtful rumor foretells we have reason to dread. What with French hatred of Germany and the Catholic-Protestant trouble, Europe is in an inflammable condition. A smaller match than poor Herzegovina might kindle such a blaze as this generation never saw.

MEANTIME Kaiser Wilhelm has been visiting his Italian cousin, amid rejoicings such as Milan herself has seldom witnessed. Some clever person, seeing the Milanese busy in widening streets and even destroying them in order to make their city fit for the reception of the German Emperor, has written an epigram which admirably expresses the changes which civilization has wrought. In ancient times, he says, German Emperors came to Milan and destroyed its walls and houses to punish the inhabitants; to-day the descendants of those Milanese raze streets and houses to the ground, to do honor to a German Emperor. Remembering, too, the "Barbarossa," the Italians of to-day have nicknamed his successor "Barbabanca," and received him as no "Tedescho" was ever before received in Italy. And as if nothing were to be wanting to the spectacle, the conqueror of Sedan has been sleeping in the bed once occupied by the great Napoleon. From

Jena to Sedan seems a long way, yet this old man's life has joined the two. From Novara to Custoza is but a step, yet how much lay between!

BRITISH diplomacy has asserted its rights with some success in China, the threatening aspect of Mr. Wade, the British Minister, having accomplished its end. In Japan, too, it has been aroused to a little display of the Stratford de Redcliffe kind. Whether or not Sir Harry Parkes has succeeded in the vigorous attack he has recently made on the Japanese language, we cannot yet tell. The trouble seemed to be that the Japanese tongue having no genders, contented itself with calling Queen Victoria a "female" sovereign. Whether the word "female" conveyed to the British Minister's mind an idea of disrespect, as it certainly does to those of such individuals as that one whom Theodore Hook raised to fury by calling her a "parallelopipedon" and an "isosceles triangle," we can only conjecture, but he has made a row about the matter and an diplomatic "episode" out of it. On the whole, there must be occasional excitements in diplomatic life, even in Japan. Mr. Bingham we never hear from, for there can be no doubt about General Grant's inalienable right to be spoken of as a male of the species, and we have thus, in the incident, another evidence of the superiority of institutions like ours over those of a country where no Salique law prevails.

THE month has been sadly marked by two maritime disasters of a strange and unusual character. A steamship, sailing southward along the Oregon coast, strikes another vessel, although the sea is smooth and the evening clear. For more than half an hour afterwards she floats, and yet no successful effort is made by the officers or crew to launch and provision her boats, of which she seems to have had the usual complement. When she sinks all hands go down with her, and one man, a passenger, alone of all her unhappy company, is picked up thirty hours afterwards more dead than alive, strapped to the broken pilot-house. So weak is he that his recovery is long doubted, and he can give no more particulars of the disaster than these few lines. A few days afterwards another steamship comes to anchor in the midst of a fleet of vessels outside of Galveston. The wind is strong and the

sea runs high, and she waits until morning to land her passengers. Suddenly a fire breaks out and spreads with awful quickness; the boats are launched, crowded full of human beings, and blown by the increasing gale through the fleet towards the shore. The wind changes to the seaward before morning, and the burned hull sinks in seven fathoms of water. Men hurry down the beach—a steam-tug is dispatched along the shore, but no trace can be discovered of the ill-fated boats and their crowded human cargo. The whole company, officers, men and passengers, have disappeared in the darkness—not one survivor left to tell the tale. It seems as if such things as these added new horrors to the mystery of the sea. Death by fire or death by drowning the only choice; but Death, still. Perhaps some trace may yet be found—some tidings heard of these unfortunates; but the chances are small and lessening with each hour. The tragedies of the ocean, horrible as they have always been, present few scenes more appalling in their suddenness than these.

“THE FIRE FIEND,” as the element is eloquently called in the public prints, has been having a rather good time of it at Virginia City. Well adapted as are many Western cities (like those of the north of Europe, which have so often suffered from conflagrations), to become his victims, Virginia City was peculiarly a good subject for his pranks. Hardly a building in the place was of any other material than wood. All the mills and houses were of the lightest and most inflammable description, and wood composed all the works in and about the mines, so that the whole place went off like a pack of fire-crackers. The direct loss is estimated at several millions of dollars; the indirect will, no doubt, be much larger. Expensive machinery is ruined and several mines are seriously injured. Time as well as money will be required to repair the damage, and much of the mining business must stand still for some time to come. We have seen no use yet made of this incident as an illustration of the advantage of paper as “a circulating medium” over that wicked and useless thing called “bullion.” All the paper mills of the country, it might be said, could not be burnt down at once, and if they were, mulberry leaves or bits of leather, in the shape of medals for instance, might be substituted for them without any “shock to

business" or "prostration of trade;" but here are gold mines so much damaged by a fire that the "yellow cross" cannot be mined for some months to come and meantime ———. There is much food for thought in the suggestion.

CARRUTH, the Vineland Editor, has died during the past thirty days, leaving his enemy in a dangerous position. The whole story has been often told and commented on at length, and there is, perhaps, no use in alluding to it here. And yet it seems especially to demonstrate the unhappy results which flow from the use of the pistol or bowie knife in place of the old-time remedies of fisticuff and cow-hide. Landis is a man of great energy and enthusiasm, who has created a vineyard in the pine barrens of Southern Jersey. Like all founders of cities he has grown very vain of his creation and, perhaps, too proud of its creator. Like most of them, too, he has made enemies at home. After a number of years spent in bickerings, his opponents went to the length of importing this man Carruth, with the ostensible and creditable purpose of blackguarding the Landis family through the columns of an "independent" newspaper. Landis seems to have stood a series of attacks with some patience for a time, until at last, stung by one more bitter than usual and directed at a tender spot, he takes a pistol and shoots his enemy in the head. A strange fate saves Carruth's life for a few months, but eventually he dies, and Landis is now in prison awaiting trial. Carruth's case was one which apparently deserved the old-fashioned remedy of a thorough thrashing. But instead of trying that, the injured man, in a passion, uses the pistol and destroys two lives in the twinkling of an eye. No judgment of acquittal can put him where he stood before—nothing restore that which he of all men now laments most bitterly. The lesson would be of infinite value, could men study it; but those who need it will not, and the world wags on just the same as ever.

It is fortunately too late to say much about the new Secretary of the Interior. The newspapers of all parties have spoken of the appointment and the man with such uncommon unanimity of sentiment that little remained for the people to add but "Amen." We were at fault in saying last month that the new appointee

would probably be a person "of whom no one but the President knows anything," but we hit it exactly in predicting that he would be one "of whom no one but the President would have thought." The Senate, the city of Washington and the country at large know all about the Hon. Zachariah Chandler, and to the completest knowledge the State of Michigan evidently joins a thorough appreciation of him. His fame is of the kind Webster once spoke of as not to be confined within State lines. He belongs to the whole country, and when she so generously gave him up last winter Michigan, perhaps, hardly knew the full extent of her sacrifice.

The appointment of such a statesman marks an era—different, it is true, from that which Bristow's nomination marked with a spotless stone, but undoubtedly an "era." What kind of a successor the latter might have were he to resign, now that Pennsylvania and other States have gone Republican, and the rag baby, in the words of authority, has been "suppressed," one may only judge; but as the eye scans the list of those who suffered for conscience sake and other things at the Congressional election of last fall and during the months that followed, it grows dim with an unbidden tear to see among the statesmen still in private life the names of A. R. Shepherd and B. F. Butler.

BUT after all the Ohio election had other results besides the appointment of a Secretary of the Interior, of the kind which General Grant has given us. If it did not suppress the Rag Baby it gave his constitution a check of the most serious description. It does seem, however, as if those who attribute the success of the Republicans entirely to the financial question undervalued the influence of the school question upon the average voter. Here in the East, (especially in Pennsylvania, where, in spite of newspapers and stump orators, we know that our school system is protected by the fundamental law,) we do not understand the interest or importance which this "school question" has for the Western mind. With those who live west of the Ohio line it is a vital question, and one which takes hold of every man's mind and enters into all political contests. The steady growth of the Catholic church—its sagacity in seizing every coign of vantage—its amazing organ-

ization and the directness and secrecy with which it works, have at last alarmed the sturdy descendant of the Puritan and the Lutheran who has made his home in the Mississippi Valley. He sees a danger which is not present to our eye, not perhaps because it does not exist here, but because this is not the chosen ground of action. And while the arguments of Mr. Schurz and the others who followed him contributed vastly to the result of the Ohio contest, there is no doubt that the religious question entered largely into the influences which determined the voter. The general result, too, has not been decisive, although in the main so satisfactory. Take out the county in which Cleveland stands, and Allen has Ohio. Take away half of Philadelphia's Republican majority, and Pershing is elected. In Wisconsin the majority is small. Massachusetts elects Rice only by a plurality. If the general elections can be said to have demonstrated anything, it is simply that which but few Democrats seemed able to comprehend after last Fall's elections and still fewer Republicans understand now:—that neither party is strong enough to abandon principle and entrust its management to its worse elements, but that the largely increased body of independent voters will go over to that organization which seems the most honest and sincere. Last year the Democrats thought that the deserters from the Republican ranks had come to theirs to stay, and the idea turned their heads. It will be fatal to the Republicans to imagine that their late successes have put the country in their pockets for five years to come. A careful count shows it pretty evenly divided. Neither party can count on a majority of the electors without hard work, good candidates, and honest platforms; and if we could gather no better fruits from Tuesday's shaking of the trees, this fact alone should make us thankful. What the American people want now is honesty and capacity in office, and they care much less about party names than the politicians think. With an honest platform and a man like Tilden who has done something, the Democrats will carry the country against promises and a party hack:—with an honest platform and a man like Bristow, who has done something, the Republicans will sweep it if pitted against promises and a politician. Could some means be devised by which the majority of both parties might have a chance, which they have not had for fifty years, of choosing the candidates they wished, we might have a struggle

in which, in any event, the country would have a first-rate President; and if that be impossible, as it probably is, and the people will still make their power felt as they easily can, between this and the nominating conventions, we shall have such a contest anyhow.

It does seem as if the election of November 2d had settled the Currency debate thus far; that unless there should be some unlooked for action in Congress this winter, both parties will accept Hard money principles, and so remove that question from the Presidential fight. But it must be remembered that anomalous as it seems in a representative government, the Congress which will assemble next month was elected on different issues a year ago, and will not therefore be as sensitive to present opinion as it might have been, had it been chosen now. Much will depend on its conduct during the coming session, and these are not times in which to waste words in prophecy.

PHILADELPHIA, as usual, rolls up a handsome Republican majority, and so saves the State to the party. The County candidates are elected by largely reduced majorities, which show that the dissatisfaction which is felt in the party at the present managers is not confined to the Union League alone. But they are elected, and our local leaders are not of a kind to care much about figures when the result is fixed to suit. The contest in the Union League, which ended in so emphatic an endorsement of the action of the Committee of Sixty-two, demonstrated to the public (which it had not been able to believe for many years) that the League was not owned by the worst elements of the party, and laid the foundations of a restoration to it of its old-time influence and prestige. The League controls but few votes outside of its members, and those whom they personally influence, simply because the people have believed it to be governed by the Ring. The recent victory of the anti-Ring element, logically carried out, will give the institution the power it once possessed, and regain for it the confidence of a justly doubting community. Undoubtedly, the dishonest position of the Democracy on the currency question helped to increase Hartranft's majority in the city, and that it in its turn swelled the vote for the county ticket; but the result remains that the Republican party can

carry Philadelphia with fairly good candidates whenever it pleases. Here and there a peculiarly exceptionable one will be defeated, but there is a working majority for the "regular" ticket. Such a state of things is unfortunate, because of the character of the local Republican leaders. With them Republicanism represents an idea peculiarly their own, and politics a means of making money; and they have acquired by experience undoubted skill in the application of that means to the only end they have in view. Meantime they are followed by a crowd of expectants, full of the same spirit and similar ambitions, who hope to take their places after a time; and the people—true to the principles which made the party, remembering its past, and confounding it, naturally, with its present, are always ready to help them without exactly knowing what they do, and so the thing goes on. The end of such men is not peace, nor of such things public prosperity; but neither seems just now to be at hand.

The fact that Philadelphia is so constantly saving the party, and then being snubbed, cannot much longer be overlooked. Time and again she elects Republican Governors and secures the choice of Republican Senators. More than once, and recently, she settled a Presidential contest. But no Philadelphian is made a governor nor sent to the Senate of the United States, and a Republican President finds no room in a Cabinet that has contained representatives of Democratic Maryland, and Democratic Georgia, and Democratic Kentucky, and Democratic Connecticut, and Democratic New Jersey, and, two at a time, of Democratic New York, for a Republican from this city or even from this State. We have said before in these pages that much of this is her own fault. As long as she does injustice to herself she cannot expect others to do her honor. "Ex pede Herculem"—but Philadelphia never puts her best foot foremost.

BRIC-A-BRAC.¹

WHEN Thackeray lived and wrote in Paris, in 1832, that city was, in the eyes of the art student, simply the paradise of young painters. He passed his days in the Louvre, his evenings with his French artist acquaintances, of whom his preface to Louis Marvy's *Sketches* gives so pleasant a glimpse, or sometimes in his quiet lodgings in the Quartier Latin, in dashing off, for some English or foreign paper, his enthusiastic notions of the French exhibition, or a criticism on French writers, or a story of French artist life. In one of these papers he describes minutely the life of the art student in Paris, and records his impressions of it at the time. "To account," (he says), "for the superiority over England, which, I think, as regards art, is incontestable, it must be remembered that the painter's trade in France is a very good one; better appreciated, better understood, and generally far better paid than with us. There are a dozen excellent schools in which a lad may enter here, and, under the eye of a practiced master, learn the apprenticeship of his art at an expense of about ten pounds a year. In England there is no school, except the academy, unless the student can afford to pay a very large sum, and place himself under the tuition of some particular artist. Here a young man, for his ten pounds, has all sorts of accessory instruction, models, etc., and has further, and for nothing, innumerable incitements to study his profession which are not to be found in England. The streets are filled with picture shops; the people themselves are pictures walking about; the churches, theatres, eating-houses, concert-rooms, all covered with pictures; add to this incitements more selfish, but quite as powerful, a French artist is paid very handsomely—for five hundred a year is much where all are poor—and has a rank in society rather above his merits than below them, being caressed by hosts and hostesses, in places where titles are laughed at and a baron is thought of no more account than a banker's clerk.

The life of the young artist here (in Paris) is the easiest, merriest, dirtiest existence possible; he comes to Paris probably at sixteen from his province; his parents settle forty pounds a year on him and pay his master; he establishes himself in the Pays

¹Notes of a Lecture for the Philadelphia Sketch Club.

Latin, or in the new quarters of Notre Dame de Lorette, which is quite peopled with painters; he arrives at his atelier at a tolerably early hour, and labors among a score of companions as merry and poor as himself. Each gentleman has his favorite tobacco pipe, and the pictures are painted in the midst of a cloud of smoke and a din of puns and choice French slang, and a war of choruses, of which no one can form an idea who has not been present at such an assembly." Of course, as we all know, much of all this is changed. Life has become vastly more earnest in Paris, and with this growth of seriousness there has been an increase of expense, yet in spite of all this Paris must for years be the real home of the men who want to use the very best years of their life to do the kind of work which no classic school, no strict academy, no rigid system of instruction can supply. The guidance and direction may come from these sources, but no art inspiration.

In that charming volume, "The Memoir of Henri Regnault," the artist's friend and biographer gives an account of his studio in Paris in 1866: "How can I give an idea of the disorder that reigned there—precious stuffs, rich embroideries, curious objects of all kind, tables covered with fish and game, waiting to be transferred to canvass, all in an indescribable chaos. There was a deal of other cleverness, too, of other kinds, for art was loved and cultivated in all its forms, and music had its turn with painting—how often colors and brushes were thrown aside when a good musician came in, and we gathered around the piano to listen to Wagner or Beethoven, or sang ourselves, or, better still, listened to Regnault's exquisite voice."

In the same book there is a charming account of the life led by the students of the French academy in Rome, and of their hard work and clever play, and Regnault, in one of his home letters, describes the fête of the German artists in 1869, after that annual custom had been omitted for twelve years. All the Germans started from the Porta Maggiore, dressed in grotesque costumes, mounted on horses adorned with leaves and vines, or on asses, or carriages hidden with flowers and drawn by white oxen with gilt horns. Banners and flags waving and music playing, on they went to Torre di Schiavi, where after a simple meal and a toast drunk out of an ancient bronze goblet, there was the inevitable speech, then a fresh start for the grottoes of Cervara, and arrived

there, more speeches, dinner, songs, toasts, verses, the "Olympic Games," modified to suit the times and the tastes of modern art.

The date was finally cut on one of the natural pillars of the grotto, and the day ended with a comic melodrama in which the President of the club invoked the divinity who dwells in the grotto, renewed his vows of fidelity and promised to call again next year, and in pledge of his good faith, burned, in a vase borne aloft by imps, pieces of paper each bearing inscribed on it one of the enemies of true art, billiards, playing cards, poetry and so on, until the whole catalogue of art enemies was exhausted. In great contrast is Regnault's description of the busy and formal life of the students of the French Academy at Rome, their refectory with portraits of all the painters, sculptors, engravers, architects and musicians who have been its pupils from the beginning of the century, their beautiful Park and grand Palaces, but rather dull, to judge from his account of the reception of the last arrival from the successful contest in Paris, a Frenchman so false to old traditions that he had come through by rail, instead of making the last stage from Storta in grand procession, horsemen escorting the gala carriage by the route of the Porto Popolo and the Pincian, to punish him for this violation of the custom, he was put into an unfurnished room, treated to a shabby dinner, at a dirty table, with broken plates and crippled chairs, the room lit with tallow candles stuck in bottles, the students kept up feigned quarrels all the time, the gardener was introduced as the Director, while the real Director was pointed out as a tipsy carpenter, not a pleasant picture of French fun.

Of course a Frenchman duly entered at his own academy on the Pincian, is not likely to know much of the artist life in Rome itself. There is a pleasant book by Henry Leland, a Philadelphian, once a member of the Philadelphia Sketch Club, cut off in early life, he gives a capital chapter on artist life in his "Americans in Rome," which is well worth your reading. He wrote, it is true, in 1863, or at least his book was published in that year, and we all know that Rome in becoming, of late years, the capital of Italy, has lost much that made its attraction, and perhaps Leland's account of the cost of living there has now only an historical value. Then and now the Trattoria di Lepre, on the Via Condotti, near the Piazza di Spagna, was especially affected by artists,—opposite

to it is the Caffè Greco, where artists mostly congregate, and it is a tradition that those who like their punch weak ask for a "Carlo Dolce;" and those who prefer spirit enough to bring water into their eyes, demanded a "Pietro Perugino." Near the Fountain of Trevi, there is or was the Gabioni Restaurant, where a dinner was made up of a four cent dish of macaroni, a cent roll of bread, two cents worth of sweet olives,—in winter wild boar and beef, sardines fried in oil, and a very substantial repast cost forty baiocchi, say a quarter of a dollar, including wine, white or red, for eight cents a pint. It is easy to guess at what rate the men who lived in this way, paid for their rooms, their clothes, their models, and their material and why they liked to live and work in Rome.

Leland's book is authority for the fact that there is or was at Rome an English Academy opened to all who sketch from life as well as from casts, and that the expense is mainly borne by the British Government; but there must be some error in this, and at most some rich Englishman or well-endowed English Art Academy contributes to the expense. At all events in private studios there are abundant opportunities for work; and the price of admittance at Gigi's and Giacinti's was one paul, ten cents, for the costume class an hour, while the model posed for two hours to a cosmopolitan audience, not unfrequently of both sexes. Mr. Howells, in the first instalment of his new novel in the November *Atlantic*, refers to this rather startling fact. The life of the artists nowadays, in Rome is rather more formal than of old, and perhaps the distinctions of nationality and of schools are too sharply maintained; but the Germans, true to their instinctive love of carrying their art into their pleasures and making both of them matters of their daily life, have mainly and manfully upheld the dignity of their profession through the long years of their own struggles at home and those in Italy, for a united government,—now that it exists as an indestructible fact on both sides the Alps, it is natural enough that we should find the German artists in Rome growing stronger in numbers and more active in their influence upon society. Only recently they renewed their autumnal festival, and in their speeches and toasts they no longer showed the old timidity in touching on political subjects, and the king of Italy has no braver partisans than his artist visitors.

Since Haydon's touching tragic story was published, the style

and method of biographies, and especially of artists, may be said to have changed. There is nothing more sad than the long life of hardship and want, and the impatient endurance of it by that really able man; and only in his younger days as an art student is there an occasional flash of merriment or a gleam of brightness in the sadness that at last extinguished his life and his hopes in the gloom of despair and suicide. In the first volume of his biography, there is a cheery account of the academical life of the art students in London in 1807, a date that is separated from our present art by far greater changes than have occurred in almost any other branch of study in the intervening years. There was a vase presented to Fuseli by the students of the Academy, and Wilkie and Haydon and Denman were appointed the inevitable committee, who together with a great many other students, while regulating the business, met at each others rooms, had oysters for supper, sang songs, laughed and joked, and found the thing so very pleasant that all agreed in hoping that the silversmiths would be along while about the famous vase. Then, as Haydon says, "we got so fond of these committees, that Fuseli grew fidgetty and at last roared out, 'Be Gode, ye are like de Spaniards, all ceremony and nothing done.' The oysters, however, predominated; it took a few more meetings to settle the inscription, and even the presentation owed its success to the cold collation with which the ceremonies were finally ended." Poor Haydon summed up his halcyon days in a few fitful words. "Happy period, painting and living in one room, our pictures glimmering behind us in dimness and distance, each defect and each beauty analyzed and investigated, talking over our prospects, independent as the wind, no servants, no responsibilities, reputation in the bud, hopes endless, ambition beginning, friends untried, believed to be as ardent and sincere as ourselves, beginning with David Wilkie, Scotch, argumentative, unclassical, prudent, poor and simple, but kindled by a steady flame of genius," and ending with Haydon himself, of whom in his quaint way he speaks in the third person, as "energetic, fiercely ambitious, full of grand ideas and romantic hopes, believing the world too little for his art." Among the pleasures of his student days, was the fresh enthusiasm with which he dragged his teachers, Fuseli foremost among them, to see the newly arrived Elgin marbles, the

first purely Greek sculptures brought to England; and he speaks of our own West's grandeur of soul, far in the decline of life, and used to talk in his although stilted way of art above nature and of the beau ideal, he nobly acknowledged that he knew nothing until he saw the marbles, and bowed his venerable head before them as if in reverence of their majesty. What a life that was of West's, spent in the effort to free himself from the thralldom of the time and of the schools in which he lived, begun in our own Quaker world, blind to all art, ending in the early dawn of that revival of art now in its full blaze of day.

But even in that woeful melo-drama of Haydon's life, there are glimpses of bright and pleasant days, notably his account of the dinner he gave to introduce Keats to Wordsworth, where Charles Lamb got exceedingly merry and exquisitely witty, and his fun in the midst of Wordsworth's solemn intonations of oratory was like the sarcasm and wit of the fool in the intervals of Lear's passion. "It was indeed an immortal evening. Wordsworth's fine intonation as he quoted Milton and Virgil, Keats' eager, inspired look, Lamb's quaint sparkle of lambent humor, so speeded the stream of conversation that in my life I never passed a more delightful time. All our fun was within bounds. Not a word passed that an apostle might not have listened to. It was a night worthy of the Elizabethan age, and my solemn Jerusalem flashing up by the flame of the fire, with Christ hanging over us like a vision, made up a picture which will long glow upon

—that inward eye
Which is the bliss of solitude."

It is hard to believe that Haydon, whose life was one long agony of disappointments, could have done much to influence his pupils, when we find among them such examples of the comfort and ease and wealth of successful modern art, as in Eastlake and Landseer; and yet few men have left a stronger impress,—often as unconsciously received as it was given—on the present school of High Art in England, than poor Haydon with his hatred of the Royal Academy and all school learning.

Next to Haydon for downright, straightforward, dogmatic instruction, comes Ruskin, who lays down rules that may not be inapposite here—indeed it would be intolerable to talk even in this desultory way about art, and not to quote Ruskin. In his Oxford

lectures, he says: "The fine arts are not to be learned by locomotion, but by making the homes we live in lovely, and by staying in them; the fine arts are not to be learned by competition, but by doing our quiet best in our own way; the fine arts are not to be learned by exhibition, but by doing what is right and making what is honest, whether it be exhibited or not, and for the sum of all; men must paint and build neither for pride nor for money, but for love; for love of their art, for love of their neighbour, and whatever better love may be than these, founded on these." There is a capital practical application of Ruskin's text in the chapter on Landscape Sketching in a book by one of his pupils, the Rev. Mr. Tyrwhitt's *Christian Art and Symbolism*, and it is commended by Ruskin himself. "The great thing in sketching is not to get hurried or bothered; to know always where you are in your picture, and what you are drawing at every touch. This is knowing what you want to do, and doing it all through your picture, and keeping before you the original idea of what it is to be."

While it is always eminently right and proper for the irregulars, who love to gather in sketch clubs, to despise academies and to laugh at the historic schools of art, it is never without interest to follow the devious course of art history, and, best of all, in good old-fashioned authorities; such a one is Lanzi's *Luminaries of Painting*. He says that soon after Giotto's death, which took place in 1336, painters had multiplied in Florence to such an astonishing degree that in 1349 they formed themselves into a religious fraternity, the Society of St. Luke, following the example of their fellow artists who had done the same thing in 1200; but in these and in the Bolognese and other associations, while painters occupied the post of honor, there were other art workers, and in those days they included many of the employments that are now purely mechanical.

In the long story of art development it is necessary not to forget the example of the schools formed by the great artists who made Italy, and especially Rome, the scene of their common labors. Titian had a school, but few scholars, that is, he used their work instead of cultivating their gifts; Correggio was not above eking out his commissions by the help of his numerous followers; but the great churches, such as the noble Cathedral of

Cremona and the neighboring Church of St. Sigismund, really had their own schools of art; for several generations of painters worked there in competition and left the impress of their genius and industry in their native place until the town gave them its name for their whole order.

Leonardo Da Vinci was the actual and acknowledged founder of the Milanese school, and he carefully enforced his lessons on his numerous pupils and helped them and himself onward together. He used to haunt the more frequented places and the theatres, and in a little sketch book, which he always had about him, he copied the attitudes and various expressions of passion, and observed the same rule of diligent attention to nature even in the ridiculous, making each succeeding caricature more ridiculous than the last, contending that this quality ought to be carried to such a pitch as, were it possible, to provoke the laughter even of the dead—a standard not likely to suit the comic papers of our day. However it was reserved for a far less important man to establish the first wholesale art school—Dionysius Calvarts, a native of Antwerp, who had in Bologna a studio where he educated no less than one hundred and thirty-seven scholars, while later on the Caracci won over to their side the promising students by opening an academy of painting, furnishing it with casts, designs and engravings, introducing a school for the study of the naked figure, as well as perspective, anatomy and other requisites of art, and they enforced their lessons with so much zeal and energy that they soon became the sole authority in art, and with them ended the golden age of art, leaving later generations free to set up their own standards.

The establishment of Academies of Fine Arts marks the growth and importance of art both in public estimation and in that of the governments that abroad have thus given national aid to art instruction. The French Academy of the Fine Arts was founded in 1653, and it is now, perhaps, the most active and useful of all these schools, with lectures constantly given by twelve professors, prizes competed for every three months, and the best students sent to Rome, where the French Government maintains its school and its scholars in great splendor. Mr. Earl Shinn, the recognized art critic of this city, gave a capital account of the work done, and of the way of doing it in the French Academy in

Paris, in a succession of letters to the *New York Nation*, published in Nos. 62 and 71, Nos. 198 and 201, Nos. 205, 208 and 212, in which he described with great cleverness the various methods of instruction pursued by Cabanel, Pils and Gerome, the three active masters, showing that real sound knowledge can be given by able men, without any of that school-boy timidity as to the degree of license that can be given to grown men, working with zeal and ambition, and inspired by the traditions that make not the least important part of the value of the French Academy; it is a school in the real sense of the word, with almost unlimited freedom to teachers and pupils, a freedom that never degenerates into license, and never goes beyond the bounds of discipline.

The great galleries of Florence are the best school of art in Italy, and the grateful appreciation of those who shared its instruction and helped to renew its glories, is largely shown in the large collection; nearly four hundred portraits of artists, painted and often presented by themselves. Raphael stands there between his master Perugino and his pupil Giulio Romano, Velazquez in a picture painted when he came to Italy at the suggestion of Rubens, and was employed by the Duke of Tuscany to enrich his gallery with pictures, medals and statues, bought on his responsibility.

But perhaps the strongest example of art growing great without royal support, is that of Venice in its palmy days, when artists born beyond its limits, Titian at Cadore, Giorgione at Treviso, Paul Veronese at Verona, came to Venice, and making it their home, now make the great names of the Venetian School. Kings and Emperors vied with the great merchant princes of Venice in competing for the works of the artists, who preferred the Republic to any Court, and Sansovino, the architect, who has left the strongest impress on Venice, in his wonderful palaces, declined pressing invitations from the Pope, and from the Courts of Ferrara and Florence, saying, that as he had the good fortune to be a free citizen in a free republic, it would be folly for him to exchange his home for that of an absolute master. The example then set might well inspire both our artists and those on whose help art must depend, and a Republic may yet again be the home of art.

Not many years ago the great aim of our American artists was to go to Dusseldorf, there to enjoy the dear delights of the Mahl-

kasten, the Palette Club of that quiet little town ; along side of the Academy, under its successive masters, Cornelius, Schadow and Bendemaun, there grew up a pleasant social artists' sketch club, for it was not much more in its plan or purpose, which flourished in spite of, and helped on its more stately neighbors. The Academy had its formal rules, its orderly course of studies, its annual exhibitions, but the sketch club had its winter quarters in a great hall with beer facilities in easy reach, and in summer all out doors was its meeting place. During the long, dreary winter nights, artists of all ages, of every genre, (not of more than one gender, however,) of many nationalities, met on the common footing of a love of art, and a community of interests soon grew into friendships that are but little understood or felt outside of the Vaterland. The Carnival and other great festivities were, and are to this day, celebrated by processions, displays and theatrical performances, in which all the contrivances of art aid to heighten the effect and enhance the charm, and the fashion of displays of medieval scenes or of great historical events, largely due to the Dusseldorf Sketch Club, is now one of the striking features of the great cities, of Munich, of Berlin, of Rome ; indeed, in our own towns we find the clubs made up for the most part of Germans, introducing the fashion of picturesque processions and high jinks. With the rapid increase of the great capitals, Berlin has given shelter to a large number of artists, but large towns have too many other and more engrossing interests to give room and verge enough to the artists to make their guilds other than the cold and classic Academies, important in the popular eye. In Dusseldorf the Mahlkasten was and is one of the great attractions of the town, and from the great man of the place, the Prince of Hohenzollern, down to the boots at the inn, all were ready to help the artists in their work and in their pleasures, and in town the former was carried on almost in public, while their feasts and festivals always had an admiring audience of laymen. In Munich the art loving king strove hard to inspire his subjects with something of his own zeal and interest in the artists and in their festivities, but fortunately they have been able to get along without royal patronage and sometimes in spite of it.

The tide of recent times has set in the direction of French art, and Paris is attracting the Americans who in old times used to go to

Germany, to sit at the feet of Lessing and Achenbach and Knauss. Now they gather around Couture, Delacroix, Rousseau, Decamps, Fortuny, Madrazzo, and that long list of names that illustrate the Salons from year to year. The life of the artist in Paris is very much what it was when Thackeray wrote his clever sketches of art, and much as art itself and all else that marks the life and character of France have changed in the interval, there is no pleasanter account of the work-a-day life of the artists in Paris than that given by the man who was himself an artist in every line.

The history of the Philadelphia Sketch Club is an honorable record of the perseverance of artists and the working friends of art, in spite of local indifference or noise. Here, year after year, the actual sketchers, no matter to what school or in what kind of art they belonged, have gone on steadily, maintaining their guild by the simple rule of admitting everybody who could sketch and excluding everybody who could not. In this way, the risk of being overwhelmed by would-be patrons and gracious lovers of art, has been avoided. The result is to be found in the number of artists who have gone out of this Sketch Club into the wider arena of the public, and have found favor in the eyes of the real public; the first inspiration was drawn here, and the sympathy and encouragement, and criticism that each student here gave his fellow, helped him on in the long struggle for a more general acknowledgment. Then, too, one great merit of the Sketch Club, is the fact that the work done here in nowise partakes of the sort of competition and rivalry, which belong to the Art School of an Academy. Here it is just a common endeavor to do what each man feels inspired to do, and the result may be good or bad, it may be published or it may be kept by itself, yet the walls of the Club show that both artist and audience felt quite willing to test the popular voice; the publication of the "*Portfolio*" of the Club was a bold and creditable appeal to the public to buy and see the sort of work that was done here. If the public did not choose to buy, or for any other reason the enterprise was not successful, so much the worse for the public. The Sketch Club had made its struggle for its due recognition.

There are other Clubs here in Philadelphia that owe not a little of their interest to the senior of them all, the Sketch Club. Most of its members were diligent students in the Art Schools of the

Academy, when they were in active existence, and when they were suspended, the Sketch Club took up the task and supplied a course of studies from the life and of anatomical lectures. It is to be hoped that in turn, when the Academy is restored to fresh life and vigor in its new building, there will be room enough to give the Sketch Club quarters there, if it wants them.

The Social Art Club of this city owes a good deal of its interest to the example and assistance of the Sketch Club. The art-loving men and women of this city, joined together and agreed to give exhibitions on such subjects of art, with illustrations and essays, as would best bring out the treasures hidden in private hands. In the course of the last two winters, there have been Exhibitions of Pottery, of Ivories, of Miniatures, of Bronzes, of Etchings, of Engravings, of Eastern Antiquities, of Egyptian, Chinese and Japanese curiosities, which have served to show how much the interest in the study and in the business of making collections in all these manifold and attractive art directions, is heightened by mere community of numbers. The Sketch Club can point back to a series of exhibitions, at a time when pictures were a rarer possession than they are to-day, and their work, showing as it did, the direction of the last schools of art abroad, served to heighten and increase public interest, to give it instruction, and trained many picture buyers in the right direction, so that now this city has some admirable art examples.

There are few more notable instances of the growth of the art instinct in the right direction than the example set by one of our own fellow citizens, Mr. Adolph E. Borie, who has gathered together a small collection of pictures and all of one school, that of the latest development of French Romantic Art—Delacroix, Decamps, Isabey, Rousseau, Despres, Fromentin, Madrazzo, Zama-cois, Merle, and last and greatest of all, Fortuny, are exhibited on his walls in examples that are full of beauty in themselves and of instruction for all who love art for its own sake. The number of pictures is not so large as in other houses, nor are they all remarkable for their great value or rarity, but it is the fact that they illustrate one school of art, and that school by common consent the foremost in our day, that makes them worth special note. Then, too, besides finished pictures, there are sketches innumerable by the very men whose work is of itself the example that a

sketch club most cherishes—a brief, hasty “croquis” by Fortuny has, in their eyes, an interest and a value that none but artists can understand or appreciate. Another noteworthy instance of the valuable result of persevering labor in one direction, is that collection of engravings made by and belonging to Mr. James L. Claghorn, part of which is now on exhibition in this city under the auspices of the Academy of Fine Arts; in a thousand pieces there displayed, is a whole history of that art, and the lesson has been well told in a series of critical notices written by one of the members of the Sketch Club. Thus again it contributes to help on the growth of art in our own city. Following all of these, the early developments of art in Philadelphia, is the plan now rapidly maturing and taking shape, for a permanent collection of Industrial Technical Art, to be made up largely of examples chosen from the Centennial Exhibition, and to be housed in Memorial Hall, where it will serve as a museum illustrating the history of art and showing the progressive stages of its development in various branches of industry. What South Kensington has done for England, what the collections at the *Hôtel Cluny* and scattered through the *Louvre* have done for France, what the National Museum has done for Berlin and for Munich, what the local exhibitions of Dublin and the great English provincial towns have done for the United Kingdom, what Milan and Naples and Florence and Venice and Rome have done for art in Italy and throughout the world, all these are lessons to us, that art collections must be used to quicken the zeal and instruct the knowledge and train the eye and enlighten the judgment of the thousands who now look longingly and lovingly for instruction in art and art education.

The opportunities of instruction in the Centennial Exhibition will be but half used, if there is not a prompt and full and successful support given to the plan of a permanent art museum or memorial hall, and the organized representatives of art here should be foremost in urging it forward. The organization of the “Social Art Club,” and the “Penn Club,” each with its own house, is a good augury of the preparation for the cultivation of art in one shape or another in the Centennial Year. The “Social Art Club” had outgrown the time for its peripatetic wandering from house to house among its members,—now under its own roof tree, it can continue its task of bringing together artists and art

lovers, to exhibit their store of treasures, and to work for the future development of art here. "The Penn Club" is meant to be for this city what the "Century" has been so successfully for New York,—a gathering place where men of letters and artists and all who mean to show their love of art and letters by helping workers on in their tasks, as well by sympathy as by substantial aid,—can come together and can bring strangers who have earned distinction and are entitled to a recognition of it by those who best appreciate it. In both of these Clubs, the art element is and of right ought to be strongly represented,—quite apart from its technical side, but still always presenting its claims to recognition, support and coöperation, and thus it will be taking its place among the recognized factors of all successful city life and activity. It is not enough to have art in our galleries or in our studios,—it must be brought forward into our daily walks and made one of the attractions and requirements and necessities of our very existence. This done, we shall in time begin to feel its effect and to recognize that what it has done for Italy, it may yet do for America.

THE RELATION OF MAN TO THE TERTIARY MAMMALIA.¹

IN order to prove the affirmative of a doctrine of evolution by descent of the existing types of living beings, two propositions must be established. The first, that a relation of orderly succession of structures exists, which corresponds with a succession in time. Second, that the terms (species, genus, etc.,) of this succession actually display transitions or connection by intermediate forms, whether observed to arise in descent, or to be of such varietal character as to admit of no other explanation of their origin than that of descent.

In the field of paleontology it is quite possible to demonstrate the first of these propositions, while the proof of the second is necessarily restricted to the observation of variations and the dis-

¹Read before the American Association for the advancement of Science, at Detroit, 1875, under another title.

covery of connecting forms which destroy the supposed definitions of species, genera, etc. The conditions are more favorable for the investigation of animals of the higher types, than of those of the lower. Their late origin ensures to us the opportunity of discovery of their ancestry far more certainly than in the case of the lower, whose beginnings are lost in the remote past, and belong to periods whose deposits have undergone physical changes, or have been entirely removed and redeposited elsewhere, thus ensuring the destruction to the fossil remains once contained in them. The series of the tertiary *Mammalia* is becoming more complete through the recent explorations in the West, and the results are embraced in the forthcoming quarto reports of the Hayden and Wheeler U. S. Geological, etc., surveys of the Territories. An abstract of some of these is given in the present essay.

The primary forms of the *Mammalia* repose in great measure on the structure of the feet. Those of the teeth are also very significant, but present a greater number of variations among animals otherwise nearly related. The osteology of the feet of recent land mammals falls into several categories. These may be called the plantigrade, many-toed type; the carnivorous type; the horse type, and the ruminant (*e. g.* ox) type. The lower vertebrates, as salamanders, lizards, etc., display the simplest form of feet, having usually five toes, with numerous separate bones of the palm and the sole, which they apply to the ground in progression. The many-toed or multidigitate type of mammalian foot most nearly resembles this condition, but differs in the points of difference which are common to all *mammalia*. In the hind foot a succession of forms leads from this generalized type, to the extreme specializations observed in the horse and the ox.

The modifications are as follows: The hind foot is composed of two rows of tarsal bones, of which the second is followed by the long metatarsal bones, from which the bones of the toes originate. The second segment of the hind leg is composed of two bones, tibia and fibula, which in the salamander, etc., have a subequal union with the foot. In some multidigitates, as the genus *Bathmodon*, both these bones articulate with the two bones of the first row of the tarsus, and one, (fibula) is the smaller of the two. In many higher forms they articulate with but one of these tar-

sal bones, viz., the *astragalus*, with which they form a perfect hinge joint; the other tarsal bone of the first row is the *calcaneum* or heel-bone. In *Bathmodon* the astragalus, and the applied leg-bone (tibia) are nearly flat, offering an extremely imperfect hinge for the foot, and the heel-bone (calcaneum) is exceedingly short. The animal plainly walked on the entire sole of the foot, and must have had an awkward gait, from the slight power of flexing the ankle-joint. From this point to the horse on one side, and to the ox on the other, we have a line of succession of intermediate forms. And before describing them, I may state that the *Bathmodon* is one of the oldest known mammalia, its remains having been found in the lower Eocene tertiary of New Mexico and Wyoming, while the ox and horse are extremely modern animals, their advent on the earth having preceded that of man by but one geological period.

The most perfect ankle-joint is that of the ruminating animals. The astragalus presents a deeply grooved segment of a pulley; an angulated pulley, face downwards to the rest of the foot, and a smooth convexity to the hollow of the applied heel-bone behind. No such astragalus has ever been found in the lower eocene formations of America; animals bearing it in a less perfect stage, appear in the next higher period, the miocene; but it is not until the pliocene and modern times that they abound. In the *Hippopotamus* foot, we have an example of the less perfect astragalus of this type of animals. The pulley surfaces are rather flatter and less deeply grooved.

In the horse, the upper surface of the astragalus forms as perfect a joint as in ruminants, but the lower and hinder faces present the flattened surfaces which belong to the many-toed mammalia. The lower face especially is mainly occupied by one large facet, instead of the two-faced pulley of the ruminants. In the rhinoceros a lateral facet is more distinct, while in the miocene *Titanotherium* the second facet is larger, resembling, except in the still convex tibial articulation, the structure of that of the primitive *Bathmodon*.

In the heel-bone we have a succession from the short and flat form of *Bathmodon*, to the long and slender one of the horse and ruminants; the increase in length being associated with the elongation of the bones of the toes, and the assumption of the

digitigrade type from the plantigrade. The mammals of the lower eocene exhibit a greater percentage of types that walk on the entire sole of the foot, while the succeeding periods exhibit an increasing number of those that walk on the toes, while the hoofed animals and *Carnivora* of recent times nearly all have the heel high in the air, the principal exceptions being the elephant and the bear families.

A most noticeable succession is seen in the diminution of the number of toes. In the series leading to the horse, the ox, and the hyæna and cat, this reduction proceeds by the loss of a toe from the one side or the other, until in the ruminants but two are left, and in the horse but one. The series extending from the primitive eocene types with five digits, to the existing reduced forms, is most complete, although a few of the New Mexican eocene genera themselves probably exhibit but four digits, on one or both pairs of feet. The presence of the rudiments of the lost lateral digits is constantly observed, and when these disappear, it is to be finally replaced by the rudiments of the adjoining toes in process of similar reduction. The bones of the second row of the tarsus which are in connection with the toes, are not reduced so rapidly as the toes themselves; hence the bones of the toes, in order to maintain the fit of the parts, increase in width and consequently in strength. As is well known, in the horse, the single toe is as stout as several united toes of lower forms, and the two toes of the ruminants have their basal segments (metatarsals) united into a stout solid mass, the cannon bone. At the same time several of the small bones of the second tarsal row become coëssified, so that we have, in the ruminants and horse, the greatest consolidation of structure, connected in the former with the most elegant mechanism. It is scarcely necessary to add, that in the various cases of coëssification and consolidation described, the fœtus displays the original elements separated.

In the fore limb the same successional reduction in the number of toes may be traced, as I have described in the hind foot; but as the bones of the palm differ from those of the sole, the successional modification of these is also characteristic. The bones of the second row of the carpus are four in number, but as the toes are reduced, in the lines of the hoofed animals, the inner

(trapezium) is soon dropped, and the second (trapezoides) becomes united with the third (magnum). In the carnivorous order, the trapezoides is always separate, but the inner pair of bones of the first row, (scaphoid and the lunar) become consolidated into a single mass, although their original distinctness is easily determined by examination of the foetus.

The two bones of the leg which articulate with the foot and hand, exhibit a succession of changes of relation in progress towards the more specialized types. In the *Bathmodon* and *Urtatherium* of the eocene, each of these bones has considerable share in the articulation; but as we rise in the series, the surface of attachment of the lesser bones, the fibula in the foot, and the ulna in the hand, becomes successively smaller, until in the Ruminants the fibula is almost obliterated, its distal end remaining as a small tuberosity coössified to the side of the end of the tibia. In the same manner the articular end of the ulna in the foreleg is successively reduced, until this bone also becomes a thin strip coössified to the lower side of the radius, with no distinct termination, in both the horse and the ox. In the foetus these bones are well distinguished.

The dentition tells as clearly as possible the same story. Here again, as I have pointed out in a paper on the "Homologies and Origin of the types of dentition of the *Mammalia Educabilia*,"² the most specialized forms of dental structure are presented by the horse, the ox, and the tiger. But they are all modifications of a single type of tooth, viz: an oval crown supporting four tubercles on the summit, in the lower jaw, and three or four in the upper jaw. In the lower cutting molar of the cat but one of these tubercles remains, forming with another in front of it, a double shear blade whose development may be traced from its earliest beginnings in the genera of the eocene. In the odd-toed forms (tapir, rhinoceros, etc.,) the tubercles become connected transversely, forming cross-crests, and the outer ones are generally flattened on the outer side. In the horse the tubercles have a very complex form, and the spaces between them filled by a peculiar substance, the cementum. In the ruminants the tubercles come to have a crescent-shaped section and are drawn out to an enormous length, forming a prismatic tooth: here also the intervening deep val-

² Journal of Philadelphia Academy, 1874.

leys are filled with cementum. In the third series, that of the elephant, the original tubercles (permanently separate in the mastodons) are connected into cross-crests, which are drawn out to a great length, and as in the other series, are supported by a deposit of hard cementum in the intervening valleys. The transitions between these and the primitive four-tubercled molar are numerous and direct.

There is not now opportunity to consider the question of transition from type to type by descent, further than to indicate by a few examples the manner in which it has evidently occurred. This has been by unequal growth of parts during foetal life, according to the laws of acceleration and retardation. The union of the two basal bones of toes into a single one (the "cannon bone") in the ruminants, is accomplished by the more and more rapid completion of the process of ossification in the growth of those bones; the confluence of the various carpal and tarsal bones in various orders has the same history. In many genera it has been observed that the milk dentition has resemblances to other and older dentitions, which entirely disappear in the permanent teeth. This is the case with *Bathmodon* and *Equus*; while it may be observed in the kitten, whose sectorial milk tooth has the heel belonging to all the lower and primitive carnivora which is wanting from the sectorial of the adult cat. Moreover, in complex teeth, the different stages of wear represent primitive conditions of the same animal, elsewhere preserved to us in extinct adult genera and species.

Forms which violate the definitions of the orders above given are also well known. Thus *Synoplotherium* with the skull and dentition of a carnivore, has the separate scaphoid and lunar bones and flat claws or hoofs of an ungulate. *Calamodon* has the molars of an ungulate, the incisors of a rodent, and claws resembling somewhat those of a carnivore. *Loxolophodon* has feet partly like an elephant, and teeth of a tapir.

I have referred the mammalia with five and four toes, the full number of distinct tarsal and carpal bones, which form interlocking series, and in which the tread is plantigrade, to a new order called the *Amblypoda*. These represent the primitive type of the higher *Mammalia* with convoluted brains, etc., but present much variation in the constitution of the teeth. From it

have come off not only the three hoofed-orders represented by the elephant, the horse and the ox, but the origin of the *Carnivora* and *Quadrumana* is scarcely distinguishable from it, if at all; while there is little doubt that the natatory *Sirenian* order were derived from it by a process of degradation, chiefly of the extremities, in connection with the assumption of an aquatic life. The manatee, of which a fine example may now be seen in our zoölogical gardens, represents this division.

The relation of man to this history is highly interesting. Thus in all general points his limbs are those of the primitive type so common in the eocene. He is plantigrade, has five toes, separate carpals and tarsals; short heel, rather flat astragalus, and neither hoofs nor claws, but something between the two. The bones of the fore-arm and leg are not so unequal as in the higher types, and remain entirely distinct from each other, and the ankle-joint is not so perfect as in many of them. In his teeth his character is thoroughly primitive. He possesses in fact the original quadrituberculate molar with but little modification. His structural superiority consists solely in the complexity and size of his brain. The forms of the quadrumanous order, while agreeing with each other in most respects, display the greatest range of brain structure, and show that while they have made but little progress since the eocene in perfection of organization of the skeleton, they accomplished a much greater work, the evolution of the human brain and its functions.

A very important lesson is derived from these and kindred facts. The monkeys were anticipated in the greater fields of the world's activity by more powerful rivals; the ancestors of the ungulates held the fields and the swamps, and the carnivora, driven by hunger, learned the arts and cruelty of the chase. The weaker ancestors of the *Quadrumana* possessed neither speed nor weapons of offense and defense, and nothing but an arboreal life was left them, where they developed the prehensile powers of the feet. Their digestive system unspecialized, their food various, their life the price of ceaseless vigilance, no wonder that that inquisitiveness and wakefulness was stimulated and developed, which is the condition of progressive intelligence. So "the race has not been to the swift nor the battle to the strong;" the "survival of the

fittest" has been the survival of the most intelligent, and natural selection proves to be, in its highest animal phase, intelligent selection.

E. D. COPE.

TRAMPS, ANCIENT AND MODERN.

AMERICA seems destined to become a much visited country, if we may judge from the great numbers of all ranks and classes that have streamed across the Atlantic since the war. At the close of that struggle we were suddenly awakened to the fact—we had almost forgotten it—that we were a very great and a very admirable people,—endowed with all the virtues and capable of all the heroisms. We awoke and found ourselves famous—too big and too ready for fight to take an affront from any body. And so the sight-seers of the old world have come in shoals to "do" America, with more or less wisdom. Flippant critics of what we were—like Mr. Dickens—have come to join in the praise of what we are, and to carry home our money as part evidence of our excellence, especially our good taste. Statesmen have run over in the recess, and political economists have taken the leisure of their vacation to have a look at America,—to lecture us on the wisdom of giving up our national policy and adopting theirs. After consulting, for a month or so, with admiring coteries of Free Traders¹ and editors, they have gone home full of the notion that the United States is ready for a change of policy. The old type of British tourist, who came to America to search for offence and write caricature, seems to be hardly represented among them. It is lucky that Mr. Tuckerman has preserved for us some specimens of a nearly extinct species, now fully represented only among the excellent old ladies who edit *The Standard*.

But other and less desirable visitors have come, and in still greater numbers. The *swell mob* of London is not without representatives on our side the Atlantic, and next year we shall have

¹There has been one exception to this rule; a Cambridge lecturer, who has evidently been trying to see with his own eyes, and to hear what men of all opinions have to say for themselves.

nearly the whole body in attendance on the Exhibition. Perhaps it would be advisable to secure the attendance of a few of the best detectives of that and other European capitals to look after them, as it is not likely that our own will prove themselves equal to that occasion or to any other.

There is another class of European visitors that has come in very plentifully since the war and shows no disposition to cease coming;—we mean the English tramps. During last summer we spent some weeks in the vicinity of a station of the Pennsylvania Railroad, and there made the acquaintance of this species, with which everybody is more or less familiar. They trudged along the dusty roads in twos or threes, with their whole worldly possessions tied up in a handkerchief and swung from a stick. Their hands and faces were brown with exposure and sunburn; their countenances lit only by a dull and stolid cunning, empty of all serious purpose or aspirations, and devoid even of the hearty, bumptious look that ordinarily distinguishes the Englishman; their clothes sometimes ragged and always shabby; their life a life of the largest independence. They are mostly men, comparatively few women of the class having yet reached the new world. They live by the unwilling gifts of quiet country people, who fear to refuse what they ask; their nights are spent in the corner of a barn, or behind a hay stack, or even under the shade of a tree,—any corner serving their purpose, and long years of exposure making them utterly indifferent to circumstances.

They do not come to seek work; they will not accept it on any terms. Neither they nor their fathers have lived by work for centuries past, and they do not mean to begin now, when they have reached the land of plenty, their promised land of milk and honey. To dodge work, even the lightest, has long been the chief problem of their class; these specimens of it were born to the heritage of a pinched idleness, to the aristocracy of misery and of rags, without respect. The tread-mill of the "casual ward" in a British workhouse is the only thing that ever yet taxed their muscular energies, and they have no intention of dying of toil in the new world. They are come to teach to a weary and a toilsome people the noble lesson of *dolce far niente*, and in return for it they ask that their little wants be modestly supplied out of our abundance.

In all seriousness they are becoming a real nuisance, especially in the districts around the city. Their presence and their demands are becoming a decided drawback to the advantages of a rural home; to leave ladies alone in a country house during the hours of business was always an undesirable thing, and is growing every day still more unpleasant. The people who suffer from their presence are crying for relief through every channel by which they can approach the public and the civil authorities, but as yet without result of any kind.

Such a mode of life strikes an American as curiously irrational and undesirable, as well as blame-worthy. And yet the tramps, if they were in possession of all the facts, might put in a plea in its defence, that would challenge consideration. They might say: "After all we and we alone live in freedom, as your own ancestors in the past, and a considerable part of the human race in the present, conceived of freedom. We alone give no hostages to fortune; we alone keep ourselves independent of circumstances in the highest degree possible to human beings. Farming and house-building are very well for those who like that sort of life; but the world got on before men began to enclose farms and to build houses. Those pre-historic races, whose traces your archaeologists find all over the world—did they not live just as we do? And your Aryan forefathers, who supplanted them and drove them into the out-of-the-way places of Europe—were they not Nomads like ourselves? The Indians who owned America, and whose rights you have never yet cancelled in any substantially just way,—were they not Nomads too? We and you are the children of tramps—Nomads if you prefer the name—and do you wonder at finding in us the old impulse, the old love of the most absolute independence? Your philosophical historians say that that impulse lasted till well into the Middle Ages, and formed one of the chief motives to the Crusades. If they would look at their own times they would see it at work quite as powerfully—not only in those who have broken with society and its conventions, but also in the wealthy and respectable classes, who compass sea and land in search after adventures, and find no rest but in flying from land to land to see things no better than they left at home. Their route is crowded with excuses for the journey—museums, art galleries, monuments, and the like—and they would fain persuade them-

selves that these furnish its motive. But in truth it is the old love of wandering that makes these men tramps of one sort, just as we are of another."

And there is truth in the plea; for ever since the Roman Empire was broken up by what we call "the incursions of the barbarians," that is to say, through the vigorous "tramps," from whom we are descended, coming in to take possession of a territory depleted of its people by bad government, immorality, celibacy (both religious and immoral), famine, pestilence and wars—ever since the empty egg-shell of the old world gave way to the external pressure upon it—the tramping instinct has been one of the difficulties in the way of all wise legislation and social organization. The early communistic method of land tenure helped to restrain it; for when a group finally decided to establish itself in any spot, the restless party must have become the minority and had to submit to the will of the rest. In the absence of public security and the king's peace, a single tramp ran too many dangers, and a body of them that tried to live by their wits would be very promptly repressed. Early legislators, like king Alfred, did their utmost to give force to the existing constitution of society, by requiring every man to show that he was united to a group in frank-pledge, and all who were thus united were responsible for the behavior of each other. He who had no place in any hundred or tithing, was first imprisoned and then enslaved. This policy seemed to effect the result aimed at; the tramp impulse found vent during the middle ages chiefly in religious pilgrimages, and, as already said, in the Crusades. The former were not always as reputable as the company that Chaucer has portrayed to us, nor did they commonly make the hours pass merrily in the innocent pleasure of telling stories capable of repetition, though not always proper. They were often scenes of the wildest license and the grossest abuses; and it was not uncommon to find rogues who had secured whatever sanctity accrued to a visit to all the shrines of Europe, without having added to their heap of merit any Christian virtues worth speaking of. Those who had gone to the Holy Land itself, won such distinction as lazy idlers on their return, that the old English word for a loafer—*saunterer*—is traced by etymologists to those who had been to the *Sainte Terre*.

With the Tudors came in a new era for the British tramp. While every body else lost liberty under that vigorous dynasty, he regained his. The old English constitution, with its tithings and its hundreds, its frank-pledge and its wapentakes, fell into decay, and the principle of personal responsibility finally superseded the idea of the *guild*. The communistic land tenure was destroyed by the Enclosure laws, and in such a way as to deprive a great body of the people of their holdings, and to turn them adrift on the world. Their numbers were swelled by the worst of the monks, whom the dissolution of the monasteries had set adrift; though we doubt whether the poor lost much in the way of alms by that dissolution, for the monks were always rather their rivals than their benefactors. The back streets and alleys of the English cities were crowded with the dangerous class—people who have little to gain by preserving the existing order of society and its distribution of wealth. And at the same time there spread over Europe a new and strange race, the very model of the new sort of tramp. The Gypsies, whom our philologists trace to the very borders of Hindoostan, entered Europe in the beginning of this period, and spread rapidly over every country, from Moscow to Spain and Scotland. They still form the mysterious aristocracy of the tramp-world—bound together by the possession of a peculiar language—a Free Masonry to which none but their own race can gain admittance.

From this time we read of the vagrant class as both numerous and dangerous. They kept whole counties in terror. They robbed on the public highways. Statutes punished "sturdy beggars" with death, and country magistrates hung them by fifties at a time, without putting any effectual check to their rogueries. At last a royal commission under Elizabeth reported the first English poor-law, not as a corrective for existing evils so much as to prevent their spread. It required the parishes to provide for the maintenance of their own poor, while it reenacted all the old penalties for the suppression of vagrancy.

But no poor law has ever been able to rid England of the vagrant class. It has perpetuated itself to our own times, partly by continual accessions from the merely pauper class, partly by the propagation of vagrant children, who have stamped upon them, from before their birth, the vagrant instinct transmitted

through several generations of vagrant ancestors. It has grown with every growth of English pauperism, but it has not diminished in the brief era of the latter's decline. It has become a world by itself, with its traditional laws and customs, with even a peculiar slang; with signs and tokens which tell the initiated what to expect at every country house, and which escape all other eyes, however alert. It runs on one side into the great criminal class, who know the inside of the jails, and on the other into the pauper class, whose jail is the poor-house. Between these two palaces of public resort it vibrates, frequently preferring the former, because philanthropy governs the British treatment of the criminal class, while the policy toward the poor is prescribed by political economy and Mr. Malthus.

This, then, is briefly the history and character of our new importation. These are the people that throng our highways and prowl about farm-houses and country seats to see what they can pick up. What are we to do with them to make them betake themselves to some way of getting an honest livelihood? How are we, at least, to make their like in Europe understand that this country is not and does not mean to be the paradise of worthless idlers?

What has been done in England is chiefly in the way of united effort; associations have been organized in the suburban districts to furnish assistance to persons who really need and deserve it, and the members of each bind themselves, by a common understanding, to send applicants for help directly to its office, in order that their case may be investigated before anything is given them. This has the effect of diminishing the number who resort to any such district, for the news of this arrangement soon spreads through the world of tramps, and they turn their attention to more promising fields. But it applies only to cases where people are exposed merely to the importunity of these visitors, and does not meet the case of those who are exposed to their outrages, as in our more thinly settled suburban districts.

For our country a far more vigorous remedy is needed. We must have power to arrest these fellows and set them to such hard work as will make them glad to seek an easier livelihood, or to betake themselves to some other region. There is plenty of employment for them in working at our country roads, if the ser-

vice were well and effectively organized. The old poison in their blood, the hatred of honest toil, must be sweated out of them, and their self-respect brought into wholesome action by the "movement cure."

After all they are only another of the pieces of botched work that Europe—especially England—has been sending us to make over again; mis-shapen and ill-burnt bricks that we have to build into the national edifice; gnarled and twisted trees to furnish its woodwork. The old world sends us everything in which it has failed itself, and then looks on with supercilious contempt, to see whether our "experiment" will succeed. It is a big job that we have undertaken, and every bit of success rather adds to than diminishes the difficulty of the task, by bringing fresh burdens upon our shoulders.

J. D.

THE LEGAL STATUS OF MARRIED WOMEN IN PENNSYLVANIA.

HOWEVER interesting to the student is the history of the Common and Statute Law in relation to married women, the unpretentious limit of this paper would hardly permit such a gradual approach to the subject. Indeed, so wide is the field to be surveyed, embracing as it does, such a number of interesting subjects, any one of which could furnish matter for a separate essay, that we must content ourselves with at best but an outline study, which may, however, give a tolerably accurate idea of the general principles which govern the *present legal status* of married women in Pennsylvania. We must therefore assume some familiarity on the part of the reader with the *common law* theory of marriage, by which the individuality of the woman is lost during coverture, or the existence of the married state, and the results which naturally followed from such a theory: that the wife acquired her right to maintenance and dower, and the husband the entire control of the wife's personal property and his tenancy by the curtesy in the real estate; that he became responsible for her debts contracted before marriage, and all debts for necessities contracted by her during coverture; that being one person in law,

they could make no contracts with each other, nor testify in cases in which either was an interested party; that all contracts in her own name, and all conveyances made by the wife in which the husband did not join were absolutely void; and last, but not least, that the husband's life interest in her real estate and all of the personal property of a married woman were responsible for the debts of her husband. It is upon this assumption, therefore, that the reader's attention is asked to the law upon this subject, as it at present stands, and in order to a more intelligent analysis, it has been arranged under the following heads:

I. Rights of the wife in the property of the husband.

II. Rights of the husband in the property of the wife and her own rights in the same.

III. Contracts of married women.

I. RIGHTS OF THE WIFE IN THE PROPERTY OF THE HUSBAND.

During the *lifetime* of the husband the wife has no power over or interest which she can enforce in his property, either real or personal, except the indirect right to maintenance. This right she can at all times claim, and so jealous of it is the law that although as a rule the contracts of married women are void, the wife is permitted to contract, and thereby render the husband liable for all such things as are necessary for the proper maintenance of herself and her family, in a manner suitable to the husband's condition in life. But this we will consider again when we come to speak of contracts.

In order that upon the death of the husband the wife may not suffer by the loss not only of his labor but of whatever property they enjoyed together, the law has provided various means for her protection. First, the great common law right to *Dower*, which still exists in Pennsylvania, and which it is necessary to fully understand, although it has in many cases given way to rights substituted for it by statute. Many will recall the definition that Dower at common law is, "Where a man dieth, his widow shall be entitled to enjoyment for life of one-third of all estates of inheritance of which he was at any time seized during coverture, and of which her issue might by possibility have been heir." In this condition of *seisin** of the husband, however, Pennsylvania has

*For the benefit of the unprofessional reader this term may be roughly defined as "technical possession," and the phrases "title," or "right of possession," though by no means synonymous, might be substituted for it without entire inaccuracy.

made a wide departure from the common law rule as held in English courts; in that State the husband's seisin of the land may be either actual or constructive, i. e., either an equitable seisin, with the title, but not the possession in the husband, or legal, where both the title and possession are combined. Hence it is that dower may come from a trust estate in which the husband has only an equitable title.¹ So too, quite at variance with the English rule, a widow is endowable of an equity of redemption upon the well established theory in that State, that although the *legal* title rests in the mortgagee he is in effect but a trustee for the mortgagor.² Seisin of the husband, either equitable or legal, is, however, indispensable for the creation of the right to dower, and therefore a widow is not dowable of a remainder in fee-simple subject to a life estate if the husband aliened it during his lifetime, for in such a case he has never had seisin of any kind.³ Seisin alone will not suffice unless it be of an estate of inheritance, and that, too, one which "*her issue*" might by possibility inherit. So that although dower comes out of an estate-tail-general, *i. e.*, an estate limited in its line of descent to any of the lineal descendants of the first taker, because it possesses the necessary quality of inheritance, it cannot come from an estate-tail-special, limited to the children of a former wife. This right to dower attaches instantly, upon the seisin of the husband of an inheritable estate, either one which he is seized of at the time of marriage, or any which he may subsequently acquire, during coverture, and the moment that the right arises it becomes as much a quality of the estate as its quality of inheritance, and so completely is a part of the estate, that it cannot be destroyed by any means, which does not result in the destruction of the estate itself, unless it be voluntarily surrendered by the wife. Dower may be prevented from attaching at all by a settlement of property upon the wife, made before marriage, in lieu of dower. It depends upon the form of the settlement whether it is intended to bar dower out of all lands or only those of which he died seized. Since this method of a *settlement* is the means of cutting her off from so great a right,

¹ Shoemaker *v.* Walker. 2 S. & R., 556.

² Reed *v.* Morrison. 12 S. & R., 18; Bradfords *v.* Kents. 7 Wr., 474.

³ Shoemaker *v.* Walker. 2 S. & R., 556.

it is requisite that the utmost good faith prevail, and if the wife has been at all deceived as to her expected husband's property she will not be bound.⁴ The case of Kline's Estate in 14 P. F. Smith is a pertinent example. In this case a settlement was made upon a woman shortly before her marriage, by which she renounced her rights as widow and of course her dower. But at the time of the settlement, as was found by the auditor, her intended husband had purposely concealed from her the knowledge of at least three-quarters of his actual wealth, and the settlement was made upon the basis of his supposed moderate means. The Court, Sharswood, J., in affirmance of a previous decision, held, "That the parties to an antenuptial contract, were not like buyer and seller dealing at arm's length, but stood in a confidential relation calling for the exercise of the richest good faith, and while it might not be necessary to show affirmatively that there was a full disclosure of the property and circumstances of each, yet if the provision secured for the wife was unreasonably disproportionate to the means of the intended husband, it raised the presumption of designed concealment, and threw upon him the burden of disproof." If the settlement is made before marriage and in good faith the wife can have no choice, but if after marriage, the widow may elect to take either the property secured by settlement or dower, because during coverture she was incapable of contracting. Should the estate out of which the dower issue be destroyed, it cannot last longer than the source from which it springs; and hence if the husband be seized of an estate in fee-simple, liable to be defeated upon the happening of a certain contingency, should it happen and the estate be defeated, dower must fall with it. It would seem to follow from this that where an estate-tail fails for want of issue, the dower which comes from it would also fail, but on the contrary, the dower survives, as the last remnant of an endowable estate, which upon the death of the widow falls back into the bulk of the estate.⁵

⁴ Kline v. Kline. 7 P. F. S., p. 120; Kline's Estate, 14 S., 125.

⁵ This rule is founded upon the common law principle, that from estates in fee simple—conditional at common law, dower survived after failure of issue, because as is said in the note to Coke upon Litt., "For reasons now rather to be guessed at than demonstrated, this case was made an exception to the general rule * * * and the statute De Donis introduced no new estate, but only

In addition to this mode of destroying the estate and the consequent barring or destroying of dower, it may also be barred by the act of the wife herself, viz. : her joining in a deed of conveyance made by the husband, and for this a special form of acknowledgment of her signature is prescribed by statute. Such a deed being a full and complete conveyance, of all rights which both husband and wife possess in the property conveyed, it must estop her from claiming dower; it is no less true, however, that if the wife has not joined in the conveyance, the vendee takes subject to her claim, which she can assert upon the husband's death. It is, of course, to be remembered, that dower in Pennsylvania differs from that at common law, in that by reason of the "frame of government" for the province, agreed upon between Penn and the first settlers, lands were made subject to the payment of debts, and therefore, dower can only come from the estate of the husband left after such payment, as was said by Judge Rogers, in *Mitchell v. Mitchell*.⁶ "It is in all respects subordinate to the rights of creditors, she is only entitled to the surplus after satisfying their claims." This brings us to what appears to be the principle of the rule, that dower is always barred by what is known as a judicial sale. Said Judge Gibson: "Land is a chattel for payment of debts only when the law has made it a fund for that purpose. It then has undergone a species of conversion so far as may be necessary to the purpose of satisfaction, which extinguishes every derivative interest in it, which cannot consist with the qualities it has been made to assume. Thus a judgment or a mortgage binds it and converts it and it is seized as personal property on a writ, which commands the sheriff to levy the debt off the defendant's goods and chattels." Dower, may, therefore, be barred by a sale of the husband's lands by the sheriff in proceedings under a mortgage, though the wife does

preserved estates limited as conditional fees to the issue inheritable under them, by preventing the tenants of such conditional fees from alienating or disposing of them, and as they preserved the estates, they preserved the incidents belonging to them, and among others the right of the wife to her dower and the husband to his curtesy." (Coke upon Litt. 241, a. Note 4). In this State it has been decided that dower will even survive an estate in fee simple determinable by an executory devise upon the husband's dying without issue living. (*Evans v. Evans*, 9 B. 190.)

⁶ 8 B. 126.

not join in the mortgage,⁷ upon the theory that the mortgage is merely security for the payment of the debt, not a conveyance of the land, and when sold by the sheriff it is done by the law converting it into chattels for the payment, but dower is not barred by a sale under a voluntary assignment, for a voluntary assignment is but the assignment of the husband's interest which is subject to dower.⁸ Dower is held to be barred by a devise to executors for the payment of debts, for the land devised is practically chattels in their hands for that purpose, and if they do not sell it under the will, it is *liable* to be sold by creditors.⁹ Where lands have been conveyed subject to dower, it is not barred by a judicial sale under a judgment against the alienee,¹⁰ for the apparent reason that no more than *his* interest can be sold, and that is subject to dower.

Again by an act of April 14, 1851, it was enacted that where there was a bequest or devise by the husband, it should be taken to be in lieu of her dower unless the testator direct otherwise; but the widow has twelve months in which she may elect which of the two rights she will take.¹¹

Finally, common law dower in lands of which the husband died in possession, is barred by the widow accepting the statutory dower given her by the act of April 8, 1833, known as the "Statute of distributions." By this act it was provided that in cases of intestacy where an intestate shall have a widow and children, the widow shall be entitled to one-third of the real estate for her life and one-third of the personal estate absolutely. Where there are no children she has *one-half* of the real estate for life and one-half of the personal estate absolutely, and the 15th section of the act declares that the shares thus directed to be allotted to the widow, "shall be in lieu and full satisfaction of her dower at common law." It will be observed that as this act has reference only the estate of which the husband died in possession, the acceptance of this statutory dower, as it is called, does not preclude her from claiming common law dower in lands which he parted with, during coverture, without her joining.¹² The discussion of the method of enforcing all of these rights is too technically one of *practice* for our present purpose. As we have seen,

⁷ Scott v. Crosdale, 2 Dall., 127.

⁸ Helfrich v. Obermyer, 3 H., 115.

⁹ Hannum v. Spear, 1 Y., 553; Mitchell v. Mitchell, 8 B., 126.

¹⁰ Leinawever v. Stoever, 1 W. & S., 160.

¹¹ Shaffer v. Shaffer, 14 Wr., 394.

¹² Borland v. Nichols, 2 Jones, 42.

both common law and statutory dower are subject to the rights of creditors in the decedent's estate, and it may happen that the widow is entirely deprived of both, should the demands of the creditors require the whole estate. Therefore in addition to these rights another privilege is accorded married women exclusive of these, not a *very valuable* one.

The widow or children of a decedent may retain either real or personal property, to the value of \$300, which shall not be sold, but remain for the use of the widow and her family, with the proviso that it shall not impair any liens upon real estate for the purchase money. This right may be claimed under any circumstances, whether she elect to take under the will or claim dower.¹³ But a widow who has never lived in this country, nor formed part of her husband's family, cannot claim the right.¹⁴ Last right of all to which a married woman is entitled in her husband's property, is that of the administration of his estate, given her by statute, which, at the discretion of the Register, permits another person to be joined with her. If she decline to accept the appointment, she may either resign the right generally, in which case the Register is at liberty to appoint anyone who is eligible for the office under the statute, or she may resign in favor of a particular person, and then unless the Register has good reason to consider the appointment an unwise one, he is bound to make it. Should he decline for any reason, her renunciation is not binding, and she may reassert her rights.¹⁵ Briefly then, the rights of the wife in the property of the husband are during his lifetime—maintenance; upon his death, common law dower, or in lieu of it, from property of which he died seized, statutory dower, unless she accept a bequest or devise from him, \$300 secured to her exclusive of the other rights, and finally the right to administer upon his estate

We consider next

II. THE RIGHTS OF THE HUSBAND IN THE PROPERTY OF THE WIFE which also includes her own rights in the same, they being so materially affected by his. The great common law right of tenancy by the curtesy still belongs to the husband in Pennsylvania, considerably modified by statutes and decisions. The

¹³ *Compher v. Compher*, 25 Penn. 31.

¹⁴ *Speir's Appeal*, 2 C. 233.

¹⁵ *Shomo's Appeal*, 7 P. F. S. 356.

professional will reader recall the familiar definition of tenancy by the curtesy of England, "Where a man marries a woman seized of an estate of inheritance, and has by her issue, born alive, which was capable of inheriting her estate, in this case he shall, on the death of his wife, hold the lands for his life, as tenant by the curtesy of England." This contains the four requisites to tenancy by the curtesy in England, marriage, seisin of the wife, issue, and death of the wife. The important modification of this definition, necessary to make it apply in Pennsylvania, is that made by the act of 1833, which provides that birth of issue shall not be necessary to entitle the husband to his curtesy. As in the case of dower, seisin of the husband is necessary, so in tenancy by the curtesy, seisin of the wife is one condition of its vesting. Here too Pennsylvania adopts a more liberal policy than the English Court, and recognizes an equitable as well as legal seisin. It is enough if the wife have a potential seisin, or right to demand possession,¹⁶ but it must be an immediate right to demand possession during coverture; it does not suffice *e. g.* that she is merely trustee for another, with a beneficial interest in the reversion or remainder.¹⁷ But if there is an actual adverse possession the common law rule prevails.¹⁸

In accordance with the English law, curtesy as well as dower comes from a trust estate,¹⁹ and another common law rule holds, that *aliens* are not entitled.²⁰ But while curtesy issues out of an ordinary trust estate, where lands are devised or conveyed to a married woman to trustees for "her sole and separate use," the husband cannot have his curtesy, if it was the clear intention of the settlor to exclude all of his rights.²¹

This right of the husband previous to the act of '48 did not only *attach* upon the death of the wife; during coverture, he had complete possession of her property to the extent of his life-interest in the same, and by the old common law might even part with the wife's property without her joining. It is this *control* of the wife's property that renders it necessary to discuss the *husband's*

¹⁶ *Stoolfoos v. Jenkins*, 8 S. & R. 175. ¹⁷ *Stodard v. Gibbs*, 1 Sum. 263.

¹⁸ 1 Howard 54.

¹⁹ *Dubs. v. Dubs.*, 7 C., 149.

²⁰ *Reese v. Waters*, 4 W. & S., 145.

²¹ *Cochran v. O'Hern*, 4 W. & S., 95. *Stokes v. McKibbin*, 1 H., 267.

rights in considering the rights of married women, and which led to the legislation, which has so materially affected them. Not only could the husband dispose of his interest in the wife's estate *voluntarily*, but it was also liable for his debts, so that the wife might, upon the sale of his interest, be deprived for her whole life of the enjoyment of her separate estate.

It is true this power of the husband extended only to his life-interest, when disposing of the real estate, and so early as February, 1770, a statute was passed prescribing a special form of acknowledgment for the wife, to be made before a duly authorized person, "in every grant, bargain and sale, lease and release, feoffment, deed, conveyance or assurance in the law whatsoever, of the lands, tenements, or hereditaments of a married woman." The substance of the acknowledgment is, that the wife has been examined "separate and apart from her husband, and that she declares the conveyance or assurance of whatever kind it may be, to be of her own free will and consent, and without any compulsion or coercion."²²

Unless these requirements are complied with the instrument will be invalid, and the wife's property not liable; mortgages²³ and leases, are held to be within the terms of the act, which is literally construed for the protection of the wife. And it is very important to notice that the same form is required in the case of a *power of attorney* to convey.²⁴

When we remember that the husband had entire control of the wife's personal property, and this control of the real estate, although as we have seen partially limited by statute, we are prepared to appreciate the necessity for legislation, supplied by the Act of April 11, 1848. This act enacted that "Every species and description of property, whether consisting of real, personal or mixed, which may be owned by or belong to any single woman, shall continue to be the property of such woman as fully after her marriage as before, and all such property, of whatever name or kind, which shall accrue to any married woman during coverture by will, descent, deed of conveyance or otherwise, shall be owned, used and enjoyed by such married woman, as her own

²² Jamison v. Jamison, 3 Wh., 457. McCandless v. Engle, 1 P. F. S., 310.

²³ Jamison v. Jamison, Id. Miller v. Harbert, 6 Phil., 531.

²⁴ Fulweiler v. Baugher, 15 S. & R., 45.

separate property, and the said property, whether owned by her before marriage or which shall accrue to her afterwards, shall not be subject to levy and execution for the debts or liabilities of her husband, nor shall such property be sold, conveyed, mortgaged, transferred or in any manner encumbered by her husband, without her written consent first had and obtained and duly acknowledged before one of the judges of the Court of Common Pleas of this Commonwealth, that such consent was not the result of coercion on the part of the said husband, but that the same was voluntarily given and of her own free will." By act of May 14, 1874, the acknowledgement in the sale or transfer of personal property, may be made before any alderman or justice of the peace.

As was the natural result of such an inroad upon the common law by statute, this act has been productive of almost endless litigation, and in determining its meaning two modes of construction have been followed. The first rule of interpretation is led by the authority of *Cumming's Appeal*,²⁵ decided very shortly after the passage of the act, and in the full flush of the change that it had wrought in the marriage relation,—the other, is the rule subsequently adopted, and when a longer contemplation of its working had given a cooler judgment as to its meaning.

Cumming's Appeal was decided in July of '49, little more than a year it is seen from the time of the passage of the act. It originated in the Orphan's Court of Union county, asking that all of the money and personal property and papers connected with the real estate belonging to his wife, who was at that time a minor, should be paid and transferred to the husband by her guardian, in accordance with the rule previous to 1848. It would have been enough for the decision of the case had the Supreme Court simply sustained the lower court in its refusal to make such a decree under the act. But it was just at the time that the wave of legislative reform on this subject had reached its height, and the first important decision under the act. Naturally, therefore, the court was disposed to follow the tendency of the time, and carry the *effect* of the statute even beyond its intention, and in its pleasure at applying the remedy forget the true *limit* of the evil to be

²⁵ 1 Jones, 272.

corrected. It was this which led Judge Rogers to say in his opinion : " By that act which seems to meet general approbation, with but few exceptions, a married woman must hereafter be considered a feme-sole²⁶ in regard to any estate of whatever name or sort owned by her before marriage, or which shall accrue to her during coverture, by will, descent, deed of conveyance, or otherwise. The act works a radical and thorough change in the condition of a feme-covert. She may dispose of her separate estate by will or otherwise as a feme-sole. * * * In short, unless with her assent the husband has no control over her estate, except as her agent and by authority derived from her." One case only, *Good-year v. Rumbaugh*,²⁷ seems to recognize the dictum of *Cumming's Appeal* as law, but that was also decided by Judge Rogers in the following year ; and here too the point decided, that the husband cannot dispose of the wife's property without her consent has not been doubted, it is only the *spirit* of the decision which is at fault. The result of the principle advanced by Judge Rogers would have been to entirely do away with any restraint upon alienation of their property, as before imposed upon married women, and left them at the mercy of their own caprice and judgment ; but a case arose in 1852, *Peck v. Ward*, reported in 6 Harris,²⁸ which brought the court face to face with this very point, and compelled them either to follow the rule for interpreting the act of 1848, adopted in *Cumming's Appeal*, and to consider the act of 1770 requiring acknowledgments and the joinder of the husband to be virtually repealed, or to follow the more familiar rule that it could not be repealed unless by express words or clear implication. Chief Justice Black accordingly met the issue and said, " The act of 1770 is not repealed either expressly or by any sort of implication. There is nothing in one statute which is inconsistent with the other ; for a woman may well use and enjoy her property free from the danger of its being levied on for her husband's debts, without the right to convey it against his wishes. The old act is not supplied by the new one, for there is nothing in the *latter* about the mode of alienation,

²⁶ The old Norman-French term for an unmarried woman, or one who has no husband living, while a feme-covert, is a woman whose husband is alive.

²⁷ 1 H. 480.

²⁸ P. 506.

and the former has reference to nothing else. The salutary rule is therefore still in full force, which forbids any one from taking title to the wife's property, unless it be conveyed by a deed made not only with her own free consent but under the protection and by the advice of her husband. * * * The act of 1848 makes some important changes, but it does not depose the man from his place as head of the family." Several other cases subsequently arose in which similar efforts to do away with the restraints imposed upon married women were thwarted in the same way.²⁹

The leading case, however, which finally set the current in the right direction, was the case of *Petit v. Fretz's Exr.*,³⁰ decided in 1859. This, too, was an attempt to bind the estate of a married woman by her agreement, under seal, but without her husband joining. In an able opinion of Mr. Justice Woodward, it was clearly shown that (to use the words of Ch. J. Lewis, quoted in the opinion,) "The intention was, that she should own, use, and enjoy it (her property). It was not necessary to the purposes of the act, that she should be allowed to part with her estate without the advice and consent of her husband. On the contrary, such a construction would tend to defeat the wise and benevolent intentions of the legislature." This case has never been dissented from, and so we find two classes of cases, both held to be law and both decided upon opposite theories. The recognition of this fact then enables us to appreciate the principle which runs through all of the decisions under the act; that the evident intent of the act being to protect married women from the mismanagement or misfortune of their husbands, *it has been liberally construed to effect that end*, but very literally and narrowly interpreted when resorted to, to remove the restraints imposed and the protection from their own folly accorded to the wives. The former is the rule for our guidance in discussing the rights of the husband, the other will apply more appropriately when we come to *Contracts*.

The great object of the act being to restrain the husband and his creditors from disposing of the wife's property, without her consent formally given, the husband now acquires no freehold

²⁹ *Ritter v. Ritter*, 7 C., 396; also, *Wright v. Brown*, 8 Wr., 239; *Shonk v. Brown*, 11 S., 320.

³⁰ 9 C. 118.

property in the wife's real estate, which will enable him to mortgage, transfer, or in any way dispose of it without her written consent first obtained and duly acknowledged. But in case of a conveyance this formal consent to his acting does not render unnecessary the regular mode of acknowledgment in case of a conveyance. The husband may indeed act as *agent* for the wife, in cases where she could act alone, just as the wife may act as his *agent* or attorney, but as *husband* he possesses no power of disposition, and when he *does* act as agent, requires the same authority, either express or implied, as would be required of a stranger. For example, he may build on her lands, and render them liable to be bound by a mechanics' lien, if she consent,³¹ for, as will be pointed out, this is a contract that she herself might make. Or he may act as her agent in the collection of income, but he is bound to account to her for the money received.³² So inflexible is the rule that the husband cannot bind the estate of the wife without her consent duly obtained and certified to by the proper acknowledgments, that it seems that *oral* testimony to that effect is of no avail;³³ either the wife must give her consent to bind her estate in the prescribed form, or she must herself join in the instrument, just as was required before the act of '48.³⁴ Notwithstanding these restrictions upon the husband in his control of his wife's separate estate, he is still entitled to enjoy it with her. "By marriage the wife surrenders the enjoyment of her property so far that the husband has the right to possess and enjoy it with her, and she could never bring against him an action of trespass on her lands, or for use and occupation."³⁵

Nor is this merely a nominal right; the husband's "marital rights" in the wife's property exist as they did before the act, and it was held in *Duncan's Appeal*³⁶ that a conveyance to trustees of all her property by a woman two days before her expected marriage, without the consent of her intended husband, was in valid, because a fraud upon his marital rights; this, too, even

³¹ *Forrester v. Preston*, 2 Pitt's, 298. *Murphy, et ux v. Bright, et al.* 3 G. 296.

³² *Mellinger v. Bausman*, 9 Wr. 522. *Gicker's Adm'r. v. Martin*, 14 Wr. 138

³³ *Finley's Appeal*, 17 P. F. S. 453. *Sharswood, J.*

³⁴ *Haines v. Ellis*, 12 H. 253.

³⁵ *Walker v. Remy* 12 C. 415. *Lowrie, C. J.*

³⁶ 7 Wr., 67. Also, *Belt & Ferguson*, 3 G., 289.

though after the marriage, but without knowledge of his rights, he had acted as agent under the deed of trust. This interest of the husband, the joint possession and enjoyment of the wife's property with her, is one which cannot be touched by his creditors; for by the act of '48 of course the wife's share is protected from levy and execution for the debts and liabilities of the husband, and by a subsequent statute³⁷ even his estate by the curtesy is exempted during the life of the wife. Thus it appears that the act of 1848 secured some benefit to the husband also, for if the wife have only a sufficient property, an insolvent husband may still live in comparative ease and comfort. However, there is one case in which the property of the wife is not protected from a judgment against him, that is, one recovered against him for the torts of the wife;³⁸ and again, in an action for necessities where the debt has been contracted by the wife alone, suit may be brought against both husband and wife, and in case the husband has no property, the wife's may be finally liable;³⁹ but a joint contract by husband and wife does not render her property liable.⁴⁰ Where real estate is held by husband and wife by entireties, *i. e.*, has been given to both together, a purchaser at sheriff's sale of the husband's interest cannot recover possession during the life of the wife, because though not properly joint tenants or tenants in common, they are both seized by entireties, and are entitled to take by survivorship,⁴¹ and to permit the husband's interest to be sold would debar the wife of her survivorship and destroy the force of the statute. There is one case in which the words of the act are not allowed to militate against the common law rule, and in which a married woman's property is not protected; we refer to the case of a distress for rent, in which the property of the wife is held liable; for except in certain specified cases stranger's goods are not exempt when found upon the premises, and "the act did not intend to place the wife in a more advantageous position than a stranger, in opposition to a long-established rule of law."⁴²

³⁷ April 22, 1850.

³⁸ Act 1848.

³⁹ Act 1848.

⁴⁰ *Park v. Kleeber* 1 Wr. 251; also 4 Leg. Ind., 196. Although one made by a stranger, if duly authorized by the wife will do so.—*Bear's Estate*, 10 P. F. S., 435.

⁴¹ *Canning v. McCurdy*, 14 P. F. S., 39.

⁴² *Blanche v. Bradford*, 2 Wr., 344.

When the wife wishes to claim the benefit of the act as against her husband's creditors, she must show conclusively that the property in question is her own;⁴³ e. g., in the case of real estate she must show positively either that it was her property before marriage, or in case it was acquired during coverture, that she obtained it by a gift or devise to herself, or purchased it with money from her separate estate.⁴⁴

There was one class of property not secured to the wife by the act of '48, which was provided for by that of April 3, 1872, however, viz.: the right to her separate earnings, which had previously, of course, accrued to the husband. But in order to avail herself of this right, she must present her petition in the Court of Common Pleas, stating her intention of doing so, and thereupon a certificate to that effect is given her, and thus forming part of the record of the court is conclusive evidence of the fact.

In order that the separate estate thus secured by legislation may be properly cared for, an act of April 25, 1850, permits the wife in every case in which her property is secured to her as by the act of '48, to apply to the court for the appointment of a trustee to take charge of it, and the same act permits her to declare a trust in favor of her children.

Since the act of '48 succeeded merely in putting the wife's property *legally* beyond the husband's control and the claims of his creditors, but left her subject to his influence, and so the purpose of the act was practically in great measure defeated, a method of protecting her which originated long before the act has remained in use, by which the property of the wife is put even beyond her own control. Although the general policy of the law is against any restraint upon the alienation of property, still to carry out the laudable intent of the settlor, the law permits a trust to be created for the "sole and separate use" of a married woman, to be free from the control of her husband and not to be liable for his debts. No set form of words is necessary to render such a trust good, but they must be such as will plainly indicate the intention of the creator of the trust. Nor is it necessary that there should always be a trustee *named*,—when the

⁴³ *Aurand v. Schaffer*, 7 Wr., 363.

⁴⁴ *Brown v. Pendleton*, 10 P. F. S., 419.

trust is created without one, the law will not let the trust fail, but the courts will appoint one. It has been said that the courts will support such a trust in order to carry out the intention of its creator, that intention being the protection of the property of a *married woman*, or one in immediate *contemplation of marriage*. This, in accordance with the rules adopted in Pennsylvania, is the most important element of such a trust; a devise or conveyance to trustees for the separate use of a feme-sole not contemplating marriage, is void and cannot be enforced,⁴⁵ and she may claim a transfer of the legal estate, by the trustees, into her own hands. It is not necessary that the instrument creating the trust should state the fact of the contemplated marriage; it is enough if the surrounding circumstances at the time that it was created gave every assurance of it.

But it is necessary that the expectation of marriage be a *definite* one to a *definite person*. A devise to a feme-sole for her sole and separate use, and "not to be liable to the control of any husband she may have," is useless, unless at the time she have some expectation of marrying a particular individual. It is in accordance with this rule that a trust good during a first marriage cannot be revived by a second marriage, for it is held that a subsequent marriage is too remote a possibility to be comprehended within the term "contemplation of marriage."⁴⁶ Whenever the object of such a trust is to be supported the trust will be continued, but as soon as it ceases by discovery, the object fails and the trust falls with it.⁴⁷ As to the right of control possessed by a married woman over her separate trust estate, Pennsylvania has adopted a rule the converse of the English one upon that subject. In that State it is held that under a settlement to her separate use, a married woman has no greater power over her separate estate than is given or reserved to her by the instrument creating the trust.⁴⁸ It follows, therefore, that in a trust estate created for the separate use of a married woman, the legal estate is vested in the trustees, and she can in no way control it, not so much even as to dispose of the *income* in advance,

⁴⁵ Hamersly & Smith, 4 Wh., 128.

⁴⁶ Freyvogle v. Hughes, 6 P. F. S., 228.

⁴⁷ Wells v. McCall, 14 P. F. S., 207.

⁴⁸ Cochran v. O'Hern. 4 W. & S., 95; Chrisman v. Wagner. 9 B., 473. Wright v. Brown. 8 Wr. 224.

unless specially authorized so to do, and her power is only in proportion to such authority.⁴⁹

The act of 1848 *did* increase the power of married women over their own property, in *one* case never before granted to them; this was the right to will or bequeath it. This they may now do without regard to their husband's consent, provided that the will be executed in the presence of two witnesses, neither of whom shall be the husband. Of course it will be remembered that this does not permit the husband's right as tenant by the curtesy to be destroyed or impaired. But just as the marriage of a man renders his will void *pro tanto, i. e.*, so as to give his wife her dower and rights under the statute, so the marriage of a feme-sole who has made her will, will avoid it *in toto* by virtue of the act of 1833,⁵⁰ which provides specially that the will of a single woman shall be revoked and rendered void by marriage.

The remaining rights of a married woman in her own property may more properly be considered under the head of Contracts.

III. CONTRACTS OF MARRIED WOMEN.—By the common law theory of marriage a woman lost her individuality entirely, and during coverture might be said to have no legal existence whatever. She could neither sue nor be sued in the courts, unless she were a party to the action, nor would she any longer be liable individually for any debts contracted before marriage, a burden which fell upon the husband, as he also reaped the *benefit* of this absorption of her rights and liabilities, while at the same time she was absolutely precluded from making any contracts after marriage, except as agent for her husband in the single case of a contract for necessities. This exception was made because the providing a maintenance for his wife and family was a duty which the husband owed, and when he neglected or refused to perform it, the law delegated his authority to his wife, in order that she might have an expeditious means of enforcing so invaluable a right, equitably considering that what should have been done, *has been* done, and regarding the wife simply as the agent appointed by him. This rule is still strictly enforced in Pennsylvania, even though it may happen that husband and wife are not living together.

⁴⁹ For an interesting discussion of "Separate use in Pennsylvania," the reader is referred to the address of E. Coppée Mitchell, Esq., before the Law Academy of Philadelphia, May, 1875.

⁵⁰ Fransen's Will, 2 C., 202.

When the husband, without reasonable cause, compels the wife to withdraw from him, the law implies that he has given her authority to contract for necessaries.⁵¹ It has even been held that the husband is liable for necessaries furnished to the wife during a separation, although it were caused by her own act, if she had offered to return to him.⁵² As we have seen, the act of '48 was not wholly against the husband's interest, for it provided, we must presume to compensate him for the rights it deprived him of, that he should no longer be liable for the debts of his wife contracted before marriage,⁵³ but the burden of these was laid upon her own shoulders.

As was shown, it was for some time attempted to extend the meaning of the act of '48, either under one clause or another, so as to give to married women the right to make contracts, which was before impossible. This construction of the act was not accepted, and it is now indisputably settled that the wife's power of making conveyances and entering into contracts to bind her separate estate is no greater now than before, except in the cases enumerated in the act, the binding her estate for repairs and its improvement, about which there still seems to linger a shadow of doubt,⁵⁴ and certain cases provided for by special acts subsequent to 1848.

The contracts of married women then are as a rule absolutely *void*,⁵⁵ not only voidable. Hence, a deed by a wife, in which the husband did not join, conveyed no title,⁵⁶ and so of a release of dower.⁵⁷ The act made no change whatever in the mode of alienation where both join in the deed.⁵⁸ The right to convey or charge her real estate is derived solely from the act of February, 1770,⁵⁹ and *no* instrument under seal can be executed by the wife

⁵¹ *Hulz v. Gibbs*, 16 P. F. S., 360.

⁵² *Cunningham v. Irwin*, 7 S. & R., 247.

⁵³ *Bear's Adm. v. Bear*, 9 C., 525.

⁵⁴ *Sharswood, J. Moore v. Cornell*, 18 P. F. S., 320.

⁵⁵ *Keen v. Coleman*, 3 Wr., 299. *Glidden v. Strupler*, 2 P. F. S., 400.

⁵⁶ *Trimmer v. Heagy*, 4 H., 484.

⁵⁷ *Ulp v. Campbell*, 7 H., 361.

⁵⁸ *Haines v. Ellis*, 12 H., 253.

⁵⁹ *Graham v. Long*, 15 P. F. S., 383.

alone,⁶⁰ except transfers of stock of railroad companies,⁶¹ or corporations created under the laws of that State;⁶² an assignment of a mortgage by a married woman alone is void,⁶³ and her simple bond and warrant of attorney to confess judgment is equally invalid: but the court will not strike off a judgment once entered, upon a bond given for the purchase-money of real estate, unless she reconvey.⁶⁴ The act gives her no power to execute a lease without her husband's consent,⁶⁵ and in fine she can never bind her estate except for repairs or improvements, or execute any obligation for the payment of money unless her husband join.⁶⁶ Thus, from this mere outline of the authorities, we see that through them all runs the principle, that the act of '48 made no change in the power of a married woman to contract debts, except in the cases referred to of repairing and improving her real estate. It has been held⁶⁷ that she might enter into a contract for the improvement of her real estate, but where money has been borrowed for that purpose it must be shown that it was so applied;⁶⁸ but as before noticed, even this doctrine is somewhat mistrusted.

There are two exceptions created by recent acts in which married women may bind themselves; one by the act of May 15, 1874, authorizing banks to pay on check or receipt of married women any funds of theirs on deposit or any dividends due them, without the consent of their husbands; the other, a singular exception, created by the act of February 22, '72, which enacts, that "the contracts of married women for the purchase of sewing-machines, shall be valid and binding without the necessity of the husband joining in the same;" when the machine is purchased for her own use, it would seem that at this day this might almost come within the range of a contract for necessaries, without the intervention of a statute.

As the contracts of a married woman with strangers are void, except in the cases mentioned, so are contracts with the husband

⁶⁰ *Pettit v. Fretz*, Ex'rs., 9 C., 118.

⁶¹ Act, June 2, 1871.

⁶² April 1, 1874.

⁶³ *Moore v. Cornell*, 18 P. F. S., 320.

⁶⁴ *Dotro v. Dotro*, 1 Luz. Obr., 189.

⁶⁵ *Miller v. Harbert*, 6 Phil., 531.

⁶⁶ *Keen v. Coleman*, 3 Wr., 299.

⁶⁷ *Lippincott v. Hopkins*, 7 P. F. S., 328.

⁶⁸ *Heugh v. Jones*, 8 C., 432.

himself. But this may be accomplished by the provisions of an act of April 15, 1856, which renders it lawful for married women to loan to their husbands money of their separate estate, and to take in security a judgment or mortgage against the estate of the husband in the name of a third person, who shall act as trustee.

Although the contracts of married women with their husbands are void, they may make a gift to them; and if a husband can show that the income collected for his wife was a gift to him, he need not account to her.

We are now prepared to consider an important branch of this subject, the law relating to feme-sole traders. By two acts, February 22, 1718, and May 4, 1855, it has been provided, that in general, when mariners go to sea, leaving their wives to work for their livelihood, or when any husband from profligacy, drunkenness, or other cause, neglects or refuses to provide for his wife, the wife may be a feme-sole trader, i. e., she may sue and be sued in her own name; may make contracts and hold all of her property, subject to her free use and disposal, and in case of intestacy in the three last cases her property goes to her next of kin, as if her husband were dead. In order to prevent any dispute arising under these acts, the married woman may present her petition to the Court of Common Pleas, sustained by two respectable witnesses, setting forth the facts of the case, and then the court in its judgment will grant her a certificate, which shall be conclusive evidence on her behalf. As in construing the act of '48, so these acts have been construed with two objects in view, liberally on behalf of the wife, strictly as against creditors. In a case of *Black v. Tricker*⁶⁹ it was held that the wife might claim the *benefit* of this act, without being decreed a feme-sole trader, upon establishing the facts which entitle her to the privilege: while on the other hand another case holds that she could not be held liable for debts as a feme-sole trader, unless she engaged in some business or availed herself of the privilege of a decree. The act 4th May, 1855, enacted that no husband who shall have for one year or upwards previous to his wife's death, wilfully neglected or refused to provide for his wife, or wilfully and maliciously deserted her, shall have the right to claim any right or title in her real or personal estate, either as tenant by the curtesy or under the statute, and it shall all go to the heirs as if he were dead.

⁶⁹ 7 P. F. S., 13.

We have already trespassed too long upon the reader's time and patience in considering the property rights of married women to enter upon a discussion of their personal rights, such as the admission of the wife's testimony in causes which the husband has an interest, or the laws relating to divorce, and we must wholly omit that question of practice, suits by or against married women.

To briefly summarize the result of our investigation then, we find this to be the law in relation to married women and their property in Pennsylvania.

A married woman is entitled to maintenance by her husband during his lifetime; a right which she may *enforce* (if he neglect or refuse to provide for herself and her children) by making contracts for necessaries, for which *he* will be liable. Upon his death, she is entitled to common law dower in real estate, after the payment of all his debts: if he die intestate, she may have statutory dower, *viz.*: One-third of the real estate, of which he died seized, for life, and one-third of the personal estate absolutely, in case he leave children, if not, *one-half* of the personal estate: *or*, in case he has left a will, she may elect between taking the legacy therein contained, or the rights given her under the statute—and in addition, \$300 of his estate for the support of herself and her children is exempted from sale for the payment of his debts.

In her own property she is entitled to the free use and enjoyment along with her husband, and holds it free from any liability for his debts; she is also entitled to her separate earnings when her intention to claim them is filed of record. Her property may be liable for a judgment recovered against him for her torts, or on a judgment against both on a contract for necessaries entered into by herself *alone*, if the husband has nothing on which execution may be had, and it is always liable for contracts entered into by her before marriage. By a trust for "her separate use," either real or personal property may be so settled that she shall receive the income, but neither she nor her husband can have any control of the corpus of the estate, nor shall it be liable for any of his debts or engagements. But such a trust must be made during coverture or in immediate contemplation of marriage, and cannot survive a discoveriture. We also find that the contracts of a married woman and any agreement to bind her separate estate without her husband's consent, are absolutely void

except in certain cases. These are, contracts for the repair or improvement of her real estate, transfers of stock of railroad companies or corporations created under the laws of this State, checks and receipts to banks for money on deposit with them, and contracts for the purchase of sewing machines. In case of her husband neglecting or refusing to provide for her, she may become a feme-sole trader, and thereby contract as though she were unmarried.

Thus we have drawn a mere outline, which might be indefinitely filled in, of the present legal status of married women in Pennsylvania.

METHODS IN SCIENCE.

BY R. OSGOOD MASON, A. M., M. D.

THE search for truth has always been one of the chief as well as most ennobling occupations of the race. In its early stages the truths sought after were doubtless simple, and had reference to physical wants; nevertheless the record of this search, recalling its methods, aims and instruments, its failures and its successes, furnishes one of the most deeply interesting as well as instructive lessons of to-day. In a general view of this record one fact is prominent; it is an important one, though it may not be flattering to the vanity of an age which imagines it has arrived at much ultimate truth; to some also it may seem discouraging, though when viewed unselfishly it is the very beacon of hope and encouragement. It is this: that the truths of one age, taught, believed and confidently built upon, become crude and perhaps exploded theories in the next; or else the germs of truth which the theories contained are handed over for the exercise of less disciplined minds, while the mature and strong give themselves to new labors, whose results may in their turn become either false or trite. In each department of search this fact presents itself; in physical science embodying the truths of nature, in philosophy containing the statement of our knowledge of principles and ideas,

and in theology, the statement of our beliefs about God ; and it would be an instructive labor to study the convictions which prevailed as established truths in each of these departments of investigation in any given age, and then observe the treatment which these accepted truths have met with at the hands of each succeeding age, as thought became more acute and methods improved. Such however is not the purpose of this paper, but simply to make distinct the principal methods which have been employed in the search for truth, and point out some applications of the one which has been found most useful in scientific pursuits.

The methods by which this search has been prosecuted have been various, according to the degree of enlightenment of the investigator or according to the fashion of the times ; they have all however been attempts to work in accordance with one or the other of two distinct forms of reasoning ; first the method from higher to lower, from causes to effects, from generals to particulars, from principles to isolated facts ; and second, from lower to higher, from effects to causes, from particulars to generals, from facts to principles.

The first is the old, scholastic and more formal way of reasoning by syllogism, and is known as the *deductive* method. The second is the newer, more flexible and more generally applicable one by means of generalizations, and is known as the *inductive* method. The syllogism of the old method is simply the arrangement of the premises upon which the argument is founded in such a manner as to show plainly that the conclusion drawn must necessarily follow. It assumes for its starting point or main proposition some comprehensive truth which it takes to be self-evident or at least universally accepted as true, and then shows that the proposition to be proved is included in this universally accepted one, and consequently is also true.

Thus, *All men are mortal*, is a broad but universally accepted statement. *The Emperor of China is a man*, is also an accepted truth. Therefore *the Emperor of China is mortal* :—since by the terms of the second proposition he belongs to a class every individual of which is mortal.

No bird suckles its young, is a broad statement accepted as true, and constitutes a major premise.

The bat suckles its young, is also a statement accepted as true,

and here stands for the minor premise. Therefore *the bat is not a bird*:—since by the terms of the second proposition it possesses a characteristic which excludes it from the class of birds.

The method by generalization, on the other hand, consists in grouping together the given facts according to some law or principle which by examination is found to pervade them all. It has its basis in the uniformity of nature, which assures us that those things which in a long course of observation have occurred in a certain way, will continue to occur in the same way under similar circumstances so long as the laws of nature remain unchanged.

Thus it is observed that the oak tree has a certain kind of leaf known as the net-veined leaf; the elm, the hickory, ash, maple and birch have the same arrangement of veins in the leaf. It is also observed that these trees increase in size in a particular way, namely, by the yearly deposit of material outside of the wood and beneath the bark, thus forming the concentric rings which are seen when the tree is cut down. The same net-veined leaf and the same method of growth are also found in our fruit trees, and in nearly all trees of northern and temperate regions; hence by a process of generalization the law or principle is discovered that trees having net-veined leaves also increase by external growth; and by this means there is separated and defined a great natural class or order, the *exogens* or outer-growing trees.

The palm tree has an entirely different kind of leaf; the veins instead of connecting with each other after the manner of network, lie side by side, and hence are called parallel-veined leaves.

Palms are observed to have also an entirely different method of growth, namely, by the addition of new material along the central line or axis of the tree. All the different species of palms and a few other trees mostly tropical, are found to have the same arrangement of leaf accompanied by the same method of growth; hence the generalization is made that trees having parallel-veined leaves increase by additions made at the centre; and thus another great botanical class comes into view, namely, the *endogens* or inner-growing trees.

Both the methods of investigation here exemplified are useful, but mainly for different purposes. The ascending or inductive method is the great means of arriving at new truth; that is, of discovering the causes, laws or principles associated with the facts

coming under our observation, and thus, trusting to the uniformity of natural laws, enabling us to reason forward to facts which are not under our direct observation; while the descending or deductive method by means of the syllogism is more useful as a means of proof that the conclusions already obtained are just.

Since, however, in almost every process of scientific investigation the object is not merely to verify what is already known or received as true, but also to add something either to the number of the facts or else to our knowledge of those which we already have, the method by induction has come to be looked upon as being in a special manner and degree the method of science, and every hypothesis which does not present the facts necessary for an application of this process lacks the proper scientific basis.¹

The system of reasoning by deduction has thus far been placed first in order, because as a method advocated by schools of philosophy it was the first to take form and prominence, and has always occupied by far the largest space in systems of logic; but in the natural order of thought and development some form of induction, however simple and imperfect, must take the precedence.

So it will be found that no matter how assiduously syllogistic reasoning may have been applied at different stages of its progress, consciously or unconsciously those who have been instrumental in founding or advancing science in any of its departments, have accomplished it by observation for the purpose of obtaining new facts, or else by experimenting, and comparing the accepted facts, with the view of discovering the principles and laws according to which they exist and are governed.

The natural method, then, by which science comes into existence amongst a primitive and untutored people, is by simple observation and a rude classification of its most obvious phenomena.

Of all the sciences (unless we except some rudiments of mathe-

¹ Mr. Spencer, and also Mr. Fiske, *Cosmic Philos.*, Vol. I., chap. v., divides methods of reasoning into *subjective* and *objective*. The former method obtains its premises from what is considered reason alone, irrespective of existences of any kind. It lies entirely in the realm of metaphysics, and corresponds mainly though not wholly with the method by *deduction*. The latter or *objective* method derives its premises from processes in which the senses are employed, as observation, comparison and experiment, and corresponds mainly though not entirely with the method by *induction*.

matics) astronomy was the earliest in appearance, has been most gradual in its development, most exact and satisfactory in its results, and at present seems most inexhaustible in its material for further investigation. Its history is a history of the intellectual development of the race, and presents a fair example of the methods, the mistakes and the triumphs of science.

The first observations of a primitive people, regarding celestial phenomena, were doubtless to note those obvious facts which have a regular and tolerably frequent occurrence, such as the daily rising and course of the sun through the heavens, followed by darkness and night; the regular appearance of the new moon, its changing position, its gradual increase, its equally gradual decrease, and disappearance; the nightly moving panorama of the stars, and regular return of the various seasons. They would also be terrified by the occasional and irregularly-occurring eclipse. Gradually they would notice the return of certain stars (those which now are known as planets) at stated times, to particular portions of the heavens, changing their positions slowly amongst the other stars, increasing and then decreasing in brilliancy, or perhaps disappearing for a while only to re-appear and repeat their accustomed movements. But only crude and irrelevant ideas would accompany these observations. To the people of such an age, the earth was an extended plain, the heavens a material dome, beyond which was the empyrean, the home of superior beings, who were the cause of all they saw and could not understand. The earthquake, the volcano, the tornado and the eclipse were their angry doings, while sunshine, prolific seasons and abundant food were the gifts of their kinder moods. So, although times, and seasons, and movements of the heavenly bodies were observed, no principles were discovered or sought after, but all was referred to superior powers.

Even the early Greeks, though much less hedged in and awed by supernatural ideas, and much more free in their philosophical speculations than any of their predecessors, had not sufficient mathematical knowledge nor power of reasoning to substantiate any theories they may have formed concerning the facts with which they were familiar; and it was not until the Alexandrian school of philosophers, and with them only when within 150 years of the birth of Christ, that sufficient knowledge and en-

largement of ideas were obtained to construct and show reasons for a theory which would at all account for the facts then known. The beginning of order in the existing chaos and the starting point of astronomy as a science was the idea of a planetary system; the earth was thought to be the centre and the sun and all the other heavenly bodies revolved about it in circles.

Thales and Pythagoras, as well as others, had dreamed of such a plan, or perhaps even of a truer theory, but it was much as Shakespeare anticipated the electric telegraph while making Puck boast that he would "put a girdle round about the earth in forty minutes." And so Hipparchus, 150 years before Christ, was the first to point out this system as a reasonable one, and sufficient to account for the facts as then observed. Thus was produced the geo-centric or earth-centred system of astronomy.

Both the propositions in this theory are now known to be untrue, for the earth is not the centre of the system, nor do the planets revolve in circles; but it was a step in the right direction, and germs of truth were thus brought into view, both marvelous and of vast importance when we consider the ignorance of the times and all the disadvantages under which observations on the heavenly bodies were then made.

A careful survey of the progress of astronomical science reveals the fact that each great discovery has been preceded by a period of preparation, characterized by the gradual accumulation of new facts. Then some unusual mind has appeared, with a keener insight and more comprehensive views, which perceived the *law* pervading all these facts, reducing them to order and making them luminous with new meaning. Then succeeds a period in which the new idea, strengthened by new evidence, gradually makes its way amongst less acute and less developed minds; and this same period, which is marked by the spread and acceptance of the latest induction, is also one of fresh observation preparatory to the next discovery. Thus previous to Hipparchus there was no proper science of astronomy, but all the approximations to truth had been only untried guesses; and though facts had accumulated and movements of the heavenly bodies been observed, it remained for him to put meaning into these movements by showing how they corresponded to a grand idea. The observations made at that early period were imperfect, but so were the

intelligence and reasoning powers of the age, and so an imperfect theory served to account for them. The period of acceptance and diffusion followed. Ptolemy and the later Alexandrian school of philosophers added the weight and influence of their favor and acceptance to the theory, and it satisfied the intellectual wants of the world for more than 1,500 years. But even during that period, much of which was a time of intellectual hibernation, some new facts were observed and mathematical knowledge had increased, so that at the beginning of the sixteenth century the facts had outgrown the theory which had held them together, and a new generalization was necessary. It was then that Copernicus conceived the newer and the truer thought that the *sun* should be the central body of the system, around which the earth and other planets should revolve; a thought which caused many a difficulty to disappear and new harmony to be perceived. Thus the helio-centric or sun-centred system came into being. It was a great advance--by far too great for easy acceptance amongst the prejudiced and satisfied minds of that age. Even the senses were against the new theory, for according to them the earth was stable and the sun moved; the church, also, founded and built up under the Ptolemaic system, made the whole weight of its immense power and influence felt against a theory which apparently threw doubt on some of its accepted interpretations of Scripture; and even Francis Bacon, the father of modern philosophy, refused it his assent or favor. So powerful was the influence of long established modes of thought, and especially so difficult was it to make progress against the accepted dogmas of philosophy and the Church. Yet gradually the new truth won its way and did its work of mental enlargement and development, as new truth once studied and accepted always does.

Still some known facts would not fall into line even with the new and advancing theory; the actual movements of the planets would not correspond with what was demanded if their paths were circles; even the cumbersome machinery of "epicycles" failed to satisfy; and after another hundred years, Kepler, amidst poverty, privation and neglect, with a poet's fancy and a philosopher's patience, observed and theorized and wrought at the great problem, comparing theory with theory and fact with fact, until he had made nineteen different suppositions concerning the paths of

the planets, and gone through the tedious calculations necessary to prove them false; but the twentieth theory stood the test, and Kepler is honored in the history of science, as the first to show the *ellipse* as the true path of the planets as they move around the sun. Immediately the rebellious facts took their places in the now perfected order, and the whole scene was cleared and brightened with the radiance of a new principle.

Then Galileo turned his newly invented telescope towards the heavens and was the first of mankind to gaze into the starry depths and question far-off worlds by means of its magic powers. He solved the mystery of the milky way, resolving it into vast fields of separate stars; and Jupiter revealed to him a new and surprising spectacle,—a monster planet keeping grandly on its course, accompanied by its brood of satellites, thus bringing a planetary system in miniature all at once under his direct observation. He soon became the champion of the new system which Copernicus had heralded, and labored zealously for its advancement, though often met with suspicion, obloquy and even persecution, until at length the half-breathed words, denying his enforced recantation, as he passed from the inquisitorial chamber, "*but yet the earth does move,*" became household words and the motto of progress.

Again the season of preparation passed, and again the generalizing mind appeared. Newton saw the apple fall, the projectile gradually lose its force and return to the earth, and the planets revolving around their central body, each with speed varying in different parts of its orbit according to its distance from that centre; and he said, the same force controls all moving bodies, from the falling rain-drop to the revolving sphere. So from the mass of seemingly discordant facts, he disentangled the beautiful and far-reaching law of gravitation. Again new harmony was perceived. A new light streamed in from every quarter of the universe, and in that light men began to see unsupported bodies seeking the earth, satellites revolving about their primaries, systems of planets about their suns, and even suns circling about their distant centre, not by any material mechanism, nor by the direct power of an infinite, omnipotent, but humanly characterized Creator, who, in his anger, might at any moment dash them one against another, but in accordance with a natural and all-

pervading law, whose constancy ages past had witnessed, and ages to come could trust.

The science of geology furnishes an interesting example of the results obtained by investigations, carried on according to each of the two methods which have been here indicated.

When geology first began to attract marked attention in Europe, the deductive method of reasoning was still the favorite one, especially in Germany and Scotland. Both these countries at once took up the study according to the favorite method of philosophy, each starting with what it considered an evident truth for its major premise, reasoning logically and never doubting the result. In Germany, Werner set out with the principle that *water* was the cause of past changes in the condition of the earth's surface. From this broad statement, as a starting-point and major premise, he reasoned downward by means of the known effects of water according to hydrostatic laws, to the beds and strata of the earth, and concluded that these particular conditions were legitimate results of aqueous action. Thus was founded the German school of geology, and many famous men, amongst whom was Humboldt, were its supporters.

In Scotland, Hutton, at the same time, was pursuing exactly the same course, but was reasoning from entirely different premises. With him *fire* was the great agent by which the earth had been brought into its present state. From this, as cause, he also reasoned downward, by means of the laws of heat, with which he was especially familiar, to present geological conditions. Thus two entirely different causes were assigned for the same effect; the same method of proof served for both; and so reasonable did both appear, that each became the nucleus of a separate school of geology, with many earnest and learned adherents. Evidently there was somewhere an error; and the fact, as we now know it, is that each started with only half the truth, and no more was added by the reasoning which was used to establish the desired conclusions.

At the same time that these schools of geology were being *reasoned* out in Germany and Scotland, William Smith in England was traveling on foot all over the country, studying closely the different geological formations as they occurred at every accessible point, in mountains and valleys, in river-beds, road-

cuts and mines. At length he published a full and complete geological map of England, and thus put on record in the best possible form a most valuable store of facts for future generalization. Before these useful labors were ended, the Geological Society of London was formed, and the members pursued the same course of observation, not only in Europe but also in Asia and America, and wherever it was possible to push their reseraches. They refrained from publishing theories or speculating upon causes; their object was to collect facts until sufficient should be obtained for a larger generalization. To what an extent their labors have been successful, the numerous workers who have enlisted all over the world, and the published works of such men as Lyell and Murchison in England, Hitchcock and Dana in this country, and of numbers besides in Germany, France, and almost every civilized country bear witness. Facts have been made to disclose their principles; astronomy, chemistry, botany, and comparative anatomy, have all contributed their quota of aid; sober, rational thought, and faith in Nature and her laws and records have been strengthened, and theories have been born whose developing influence upon the race as well as whose intrinsic grandeur future generations of earnest workers and thinkers only will be able to fully appreciate. And not in physical science alone do scientific methods serve, but history, political economy, sociology, morals, and even religion, all find their laws based on the uniformity of Nature in all her different departments, whether in inorganic matter or matter in its higher condition of living forms, in occult force, in the manifestations of mind, and doubtless also in spirit itself, whatever its form or degree of refinement. True, the known facts may be but a moiety of the whole, and the inductions even from these may be imperfectly made and formulated; they may bear the same relation to complete science in these abstruse departments that the system of Hipparchus did to the astronomy of to-day; but enough of the facts already developed are falling into line to show that truth lies that way, and abundant success still awaits the diligent explorer; laws and principles as well as facts lie hidden there or dimly guessed at now, of immense influence and value as instruments of man's development here, and perchance connecting him with the hereafter.

GUSTAVUS ADOLPHUS.¹

HARROW PRIZE POEM, 1875.

I.

Up, Lion of the North! and leave thy lair,
 The thicket where thou erst wert wont to lie:
 Rise from thine ease, 'tis time to do and dare!
 For o'er the echoing sea resounds a cry
 Of nations crushed 'neath godless Tyranny,
 Or writhing helpless in the snake-like band
 Of bigot priests; with fixed imploring eye
 They turn to thee for succor. Up! thy hand
 Must quell the monster brood that desolates the land.

II.

Go forth! the seed sown in Germania's field
 Must give its Lord an hundred-fold increase;
 A fairer tillage must the Gospel yield,
 Rich with saints' blood; not yet the promised peace,
 Nor yet the Master bids His toilers cease:
 Red gleams the path that climbs to Justice' throne;
 Her servants hunger not for swift release,
 Nor dream of slumber ere the work be done;
 The gates of rest are oped by Death's cold hand alone.

¹ Robert Offley Ashburton *Milnes*, the author of these verses, is the only son and heir of Lord *Houghton*. He was born in 1857, educated at Harrow, where his Poem won the prize, and is now pursuing his studies at Trinity College, Cambridge. The Poem gives such strong evidence of real poetical power, and of a thorough mastery of the art of versification, that upon the recent visit of Lord Houghton and his son to this city, permission was obtained to print it in the *PENN MONTHLY*. Lord Houghton is better known to our reading public as Richard Monckton Milnes, and under that name (he was created Lord Houghton only in 1863,) he wrote several volumes of poetry and prose, which gained him very great and well deserved popularity. His long Parliamentary career—he was member for Pontefract from 1837 to 1863, when he took his seat in the House of Lords—has been marked by thorough independence and a warm and active spirit of well-directed benevolence. The son has certainly inherited the father's poetic gift, and will, no doubt, in maturer years, show that he is the fortunate successor of that father's other claims on public esteem.

III.

E'en as, when spring hath loosed the bonds of snow
 In some wild valley of the Switzer's land,
 Bursts into life a rock-girt torrent-flow,
 Joying to whirl the pine and gulf the sand ;
 Nor bridge, nor walls, before that deluge stand—
 So sweeps in wrath the Swedish berserk host,
 Lurid their track with smoke and blazing brand ;
 No bandits they, no Legion of the Lost ;
 To win their chiefest thought, their last to count the cost.

IV.

What though dark Friedland read the boding stars,
 And scan the midnight pole's mysterious clime,
 Though Tilly rend the Maiden City's bars,
 And squadrons reel 'neath shock of Pappenheim ;
 'Tis Right arrayed 'gainst Tyranny and Crime,
 Stout hearts, strong hands, 'gainst savage hireling's rage :
 The Avenger comes, at God's appointed time,
 To cleanse the cloister, break the captive's cage,
 Then lay at Mercy's feet his gory battle-gage.

V.

“Whom the Gods love, die young,” kind Nature saith ;
 So sang the Grecian Bard in days of old :
 Withered like grass, by fierce sirocco's breath,
 In scarce four decades may thy tale be told,
 Gustavus : scarce o'er Leipsic's field hath rolled
 The tide of conquest, now on Lutzen's plain
 The Shadow veils thee in his mystic fold,
 Thy front baptized anew with crimson stain ;
 Low lies thy hero form, majestic 'mid the slain.

VI.

“The king is dead !” Up shrills a mighty cry
 Of anguish, spreading like a forest flame,
 The outburst of a nation's agony ;
 For some wept sore who scarce had heard his name :

No light, no comfort, now, but still the same
 Black void, the sullen scowl of Fate unmoved,—
 'Tis Death, not Life, that wins us chiefest fame ;
 When heroes fall, their faith and courage proved,
 They stir a thousand hearts—scarce known, yet wildly loved.

VII.

“The king is dead !” E'en so with parted lips
 And straining eyes may stand a savage horde,
 Athwart the sun when crawls the weird eclipse,
 And shadowing slays the god they erst adored :
 Quenched are the rays but now so freely poured ;
 A strange awe holds the gazers, as they feel
 Some power unknown can bind e'en Heaven's high lord,
 Some hand of darkness, reaching forth, can steal
 The treasured stores of light those Orient vaults conceal.

VIII.

Yet higher gleams the sun, the shadow past ;
 Thy lamp, Gustavus, now is quenched for aye :
 Hadst thou but pondered ere the die was cast !
 Hadst thou but loved to live, or scorned to die !
 O if—in lieu of that fierce ecstasy
 And berserk fire, born of the brave old time,
 When Vikings led their fair-haired chivalry,
 “ Youth of the world, our Europe's second prime,”
 To chase the setting sun, or waste the South's warm clime—

IX.

If thou hadst deigned, not scorning consequence,
 To count thy foes, to wait as well as dare,
 Thy spirit sobered with the saving sense
 Of all the load a leader's heart should bear—
 Yea, had thy Grandsire's patient faith been there !
 He who endured for many a weary day
 In holes and caves to keep his lion lair,
 To trust the Dalesmen's troth, and shun the fray,
 And still for Sweden's sake to live as Sweden's stay.

X.

Dear to thy childhood, borne o'er fell and flood,
 Drunk with each breath beneath thy frozen sky,
 Wafted on breezes of the black pine wood,
 Glassed in each lake's unmoved transparency—
 How should the tale not charm thee, spirit high?
 How shouldst thou fail of great Achilles' choice
 'Twixt brutish ease and hero-destiny?
 'Tis thine to shock with danger, and rejoice,
 Though round thy careless ears still float the fatal Voice.

XI.

May I, then, blame thee? Lacking was there one
 Of those full notes which swell the perfect chord,
 Tuned by God's hand in holiest unison
 In those pure hearts that know and love their Lord—
 Pilots of thought, or champions of the sword?
 Ah no! no blame could reach or wound thee now,
 Though e'en thyself mightst murmur at the word
 Which gave surcease of toil, or marvel how
 Thy work was left undone, yet unfulfilled thy vow.

XII.

But was it granted thee to know, great heart,
 That thou, half sorrowing for thy people's fate,
 The mantle of thy valor shouldst impart
 To Sweden's other sons, yet uncreate?
 That Leipsic's plain, which saw thy high estate,
 Again should summon to the cannon's roar
 The nations, banded in a glorious hate;
 When, noblest traitor, Bernadotte bore
 To win and wear the palm which Brutus earned before?

XIII.

Ay, when the fields of Europe shall resound
 With Prussian cheer, with Cossack's wild "hourra,"
 Foremost shall Sweden's sons, I ween, be found
 In hour of need to turn the tide of war,

To tear the laurels from the conqueror's car,
 And dash great Caesar from his throne of wrong—
 Teach him that 'tis not genius' flaming star
 Can light the world, when Freedom's sun shines strong,
 Nor vain the cry to Heaven, "How long, O Lord, how long?"

XIV.

Fast fell thy tears, fair Sweden, o'er thy Chief,
 Thy tears of pride and anguish, bitter-sweet;
 Not thine that faintly figured show of grief,
 When sabled mourners go about the street,
 And trick the world with sorrow's counterfeit,
 For that some leader, first in state or fray,
 Sinks 'neath the burden of the sun's fierce heat;
 Not his the dues true Love delights to pay;
 Chill pomp and dull respect but mock the senseless clay.

XV.

No, thine the tears that level man with man,
 When common anguish shakes a nation's breast;
 E'en as when Judah mourned for Jonathan,
 And David sang o'er him he loved the best:
 Such mourners, God hath said it, such are blest;
 For as a blinding rush of torrent foam
 Tosses a rainbow somewhere on its crest,
 So in thy thoughts of grief, where'er they roam,
 One ray of joy abides—thy Martyr finds his home.

XVI.

Spare, then, to mourn as over task untried,
 Duty disowned, or strife by sloth unstriven;
 But rather joy that one hath lived and died
 Beneath whose guardian hand fair Truth hath thriven,
 His life one steadfast sacrifice to Heaven,
 His death the seal of triumph for the Right—
 A beacon-star to darker ages given,
 Flashing his cheering rays through storm and night,
 To gladden weaker hearts with never-waning light.

ROBERT OFFLEY ASHBURTON MILNES.

BALAUSTION'S ADVENTURES.¹

MR. BROWNING is "caviare to the general." His audience is made up of that section of the cultivated world, who possess the gift of sympathy with grotesque humor, and the power to follow with care and patience a course of thought sketched to the imagination, and apprehended through the imagination by the reason. Such a number of pre-requisites to the full enjoyment of his poems, involves a very great limitation of the number of those who enjoy them, and in the best educated circles the majority will commonly be found to avow, without any hesitation, that they do not understand him. Among those who do appreciate his poetry, there are very different degrees of initiation into its beauties, and we are of the number of the half-profane, to whom much that Mr. Browning has written is an unread riddle. We have toiled over *Sordello*, and tried hard to master *Paracelsus*, but in neither case with success.

Mr. Browning is especially strong in the imaginative reproduction of the mind of other ages than his own—in the recreation of the thought of a distant period, while preserving its moral limitations, its mental furniture, and its mental horizons. To say so much is to describe him as a poet of vast learning. No other writer of works not purely historical, and few even of our historians, compare with him in this regard; George Eliot is his only rival in the range of knowledge, and while she far surpasses him in acquaintance with science, she is—so far as her works disclose her mind—far inferior in the range of her historical learning. Hardly any aspect of the world's historic life, from the Judea of David to the France of Balzac, but has been illustrated in his poetry; all are here—Hebrew, Syrian, Greek, Byzantine, Teutonic, Italian, Spanish, American. Yet he has his favorite themes, and till these two poems appeared every stu-

¹ BALAUSTION'S ADVENTURES: Including a Transcript from Euripides. By Robert Browning. Pp. 152, large 12mo. Boston: James R. Osgood & Company. 1871.

ARISTOPHANES' APOLOGY: Including a Transcript from Euripides; being the last Adventure of Balaustion. By Robert Browning. Pp. 324, large 12mo. Same publishers. 1875.

dent of his works would have given the first place to Italy and the Renaissance; but it now seems that Greece is no whit behind either.² Equally large has been the range of passion and emotion traversed by his poetry. Love, jealousy, hate, tyrannical wantonness of power, hypochondria, superstition, exalted devotion, the passion for knowledge, for music, the lust of the eye and the pride of life, and every key in the gamut of the human heart from the highest to the lowest, he has touched with the accuracy born of the profoundest sympathy. In his love-poems for instance every true lover finds something that answers to the reality of passion; as he reads he says: "This man knows what he is talking about. He has been in love himself." Even the exceptional and unusual—the nearly indescribable moods of the human mind—he is fully at home with. Never, for instance, was there such a picture of the type of confirmed but not passionate hypochondria as is portrayed in the eerie stanzas of "Childe Roland to the Dark Tower Came,"—while at the other extreme the passionate devotion of the inspired psalmist-poet in "Saul" is an equally masterly picture of the very opposite order. Above all, this power is shown in his greatest and most elaborate work, *The Ring and the Book*, in which the story of an unhappy marriage, of the wife's flight and her murder, are told some dozen times by as many narrators, and a whole city-full of persons, ranging from the cunning brutality of the murderer up to the serene and saintly wisdom of the Pope, who finally decides the case.

Mr. Browning's power shows no decay with the lapse of years. His two "Adventures of Balaustion" will bear comparison with anything that ever came from his pen. The theme of both is on one side the same; it is the glorification in modern verse of the most human of all the poets of antiquity, the great Athenian singer who blended almost Sophocles' purity of artistic form with a personal tenderness, a warmth, an individuality of nature, a moral freedom of judgment, that are rather characteristic of modern than of ancient poetry. Mr. Browning has Milton's passionate preference for the last of the three great Athenian masters of tragedy, and both poems are meant to vindicate that preference

²The only two great themes upon which, we believe, Mr. Browning has never dwelt are the life of ancient Rome, and the Protestant Reformation.

to the modern reader. But in the second poem, as the leading title suggests, there is the farther purpose to vindicate Euripides from the abuse of his great contemporary, enemy and critic, the comedian Aristophanes, and, while doing full justice to the latter's extraordinary personality, and while making him state his own case fully and amply, to maintain that Euripides represented the higher truth in the conflict between them, even while it was true that there was truth on both sides.

Balaustion, or Wild-pomegranate-flower, is a Rhodian maiden, passionately devoted to Athens and her glories, who therefore persuades some of her kindred to fly from the island and betake themselves to Athens, when their home falls under the rule of Sparta, after the great defeat of Nicias before Syracuse. Carried out of their course by contrary winds, and then flying from Thessalian pirates, they seek a refuge in the harbor of Syracuse, but are about to be driven out to sea into the very teeth of their enemies, when the Syracusans, learning that Balaustion knows by heart the poems of Euripides, bid all welcome for her sake.

The whole city, soon astir,
Came rushing out of gates in common joy
To the suburb temple; there they stationed me
O' the topmost step; and plain I told the play,
Just as I saw it; what the actors said,
And what I saw, or thought I saw the while
At our Kameiros theatre
Told it, and, two days more, repeated it,
Until they sent us on our way again
With good words and great wishes.

It is the *Alcestis* whose story she rehearses to her Doric audience—the story of the victory of their own great ancestor, Herakles, over the awful powers of the under-world, and his restoration of the heroine to the arms of his host Admetus. She gives no verbal transcript of the original, but a blending of narrative with rehearsals from the play itself, such as a vivid memory and a poetic imagination enable her to present. But with all the lack of literalness, the spirit of the old Greek drama is wonderfully preserved; and one might say that Mr. Browning's first published attempt at translation was not only a great success in itself, and one that showed his power to understand and to reproduce in English a great poem, but also the only literary work

in which the merely English reader had the fullest access to the poetic life of a Greek tragedy, and the fullest opportunity to understand it.

In the concluding pages, which follow the drama, he makes the Rhodian conceive a different plot for the story—one in which Admetus is more worthy of his wife's sacrifice and of the spectator's esteem; but Euripides, we think, was right. Much of the pathos of the play turns on the contrast between the king and the queen—the man who shrinks back in cowardly terror of death, and the woman who faced it for love's sake. The light seems less light without the depth of shade to contrast with it.

Balaustion also notices that the play failed to win the prize—as Sophocles carried it off at that time; and she declines to make any disparaging comparisons of two whose rivalry in the service of the Muses was so free from all base alloy—

"Sophokles got it!" Honor the great name!
 All cannot love two great names; yet some do:
 I know the poetess who graved in gold,
 Among her glories that shall never fade,
 The style and title for Euripides,
The Human with his droppings of warm tears.

(This last line, as perhaps the reader will remember, is from Mrs. E. B. Browning's *Vision of Poets*.)

In the "second adventure" our Balaustion is flying from Athens back to Rhodes again. She is the wife of the Phocæan Euthukles, who had fallen in love with her as she rehearsed the *Alcestis* from the temple-steps at Syracuse—

But one—one man—one youth,—three days, each day,—
 (If, ere I lifted up my voice to speak
 I gave a downward glance by accident)
 Was found at foot o' the temple. When we sailed
 There in the ship, too, was he found as well,
 Having a hunger to see Athens too.

So they see Athens and the master, and spend the opening years of their wedded life there. But the poet leaves the ungrateful city to find a home for his old age with the King of Macedonia, whose minister of state he became.

He propped the state and filled the treasury.
 Counseled the King as might a meaner soul,
 Furnished the friend with what shall stand instead

Of crown and sceptre, star his name about
 When these are dust; for him Euripides
 Last hand on the old phorminx flung
 Clashed thence *Alkaion* maddened *Pentheus* up,
 Then music sighed itself away, one moan
Iphigenia made by Aulis' strand;
 With her and music died Euripides.

But the home of Balaustion has already become a kind of temple to Euripides, and she has taken her place in some sort as his priestess. His bust is the *penates* of its shrine and his lyre and the roll on which his own hand has written one of his tragedies lie before it. Her husband is known to all Athens as the friend of the unpopular poet, and when the story of his death comes from Macedonia and breaks in upon the chatter and gossip of "the city of gapers," it is around him that the Athenians gather to know the exact truth. It is on a day when Aristophanes having won the comic prize, is feasted with his troop at the expense of the city and under the presidency of the priest of Bacchus—

. . . . When suddenly a knock
 Sharp, solitary, cold, authoritative.
 Enters an old pale-swathed majesty
 Makes slow mute passage through two ranks as mute,
 Grave brow still bent on ground, upraised at length
 When, our priest reached, full-front the vision paused.
 "Priest"—the deep tone succeeded the full gaze—
 "Thou carest that thy God have spectacle
 Decent and seemly; wherefore, I announce
 That, since Euripides is dead to-day,
 My Choros at the Greater Feast, next month,
 Shall, clothed in black, appear ungarlanded."
 Then the gray brow sank low, and Sophocles
 Reswathed him, sweeping doorward.

This is the first news that the great comedian has had of the event. As their revels draw to a close he proposes that they shall adjourn to the house of Euthukles and Balaustion. For he avows that the death of Euripides has in no wise abated his hostility to the principles of the poet, who would fain have maimed man by destroying the body and elevating the soul on its ruins. Since Euripides is gone he would encounter

"The Rhodian, rosy with Euripides,"

and refute his false theories as they came from the mouth of his

best advocate. And so with the license which Athenian custom granted to feasters, he and his company break in upon the mourning worshipers of the dead Master in the very chamber of devotions and their sorrow. Let Balaustion describe them :

There trooped the Choros of the Comedy
 Crowned and triumphant; first those flushed Fifteen,
 Men that wore women's garb, grotesque disguise.
 Then marched the Three,—who played Mnesilochos,
 Who, Toxotes, and who, robed right, masked rare,
 Monkeyed our Great and Dead to heart's content
 That morning in Athenai. Masks were down
 And robes doffed now; the sole disguise was drink.
 Mixing with these—I know not what gay crowd,
 Girl-dancers, flute-boys, and preeminent
 Among them—doubtless draped with such reserve
 As stopped fear of the fifty drachma fine
 (Besides one's name on public fig-tree nailed)
 Which women pay who in the streets walk bare,—
 Behold Elaphaion of the Persic dance! . . .
 Elaphaon, more Peiraios-known as " Phaps,"
 Tripped at the head of the whole banquet-band
 Who came in front now, as the first fell back;
 And foremost—the authoritative voice,
 The revel-leader, he who gained the prize,
 And got the glory of the Archon's feast—
 There stood in person Aristophanes.
 And no ignoble presence! On the bulge
 Of the clear baldness,—all his head one brow,—
 True, the veins swelled blue network, and there surged
 A red from cheek to temple,— then retired
 As if the dark-leaved chaplet damped a flame
 Was never nursed by temperance and health.
 But huge the eyeballs rolled black native fire,
 Imperiously triumphant: nostrils wide
 Waited their-incense; while the pursed mouth's pout
 Aggressive, while the beak supreme above,
 While the head, face, nay, pillared throat thrown back,
 Beard whitening under like a vinous foam,
 These made a glory, of such insolence—
 I thought—such domineering deity
 Hephaistos might have carved
 Impudent and majestic: drunk, perhaps,
 But that's religion; sense too plainly snuffed:
 Still, sensuality was grown a rite.

The rest of the Comus crew shrink from Balaustion's presence, the radiant glory of her pure womanhood and its rebuke. But the poet stays, and the dialogue in which they spend the night fills up the bulk of the book. Aristophanes, of course, is the chief speaker; only so much is said by the fair advocate of the dead Euripides, as will bring him clearly to the point as to why he had hated and abused the tragedian. False pretences and excuses are swept away; they had belonged to the same party in politics; had aimed at the same end of public policy, and detested the same villains as abusers of the popular favor. The difference must lie deeper and farther back than those on which rested the party divisions that ordinarily set Athenian against Athenian.

And so, through page after page, the great comedian defends himself and assails Euripides on two grounds—the literary and the moral. The method of the comic poet is the right one: it is modern, but it has grown up out of the very life of the people, and its history has been one of continual improvement and refinement:—

Graced with traditional immunity
 Ever since, much about my grandsire's time,
 Some funny village-man in Megara,
 Lout-lord and clown-king, used a privilege,
 As due religious drinking-bouts came round,
 To daub his phiz,—no, that was afterward,—
 He merely mounted cart with mates of choice
 And traversed country, taking house by house,
 At night,—because of danger in the freak,—
 Then holloed, "Skinflint starves his laborers!
 Clinchfist stows figs away, cheats government!
 Such an one likes to kiss his neighbor's wife,
 And beats his own; while such another . . . Boh!"
 Soon came the broad-day, circumstantial tale,
 Dancing and verse, and there's our Comedy,
 There's Mullos, there's Euetes, there's the stock
 I shall be proud to graft my powers upon!
 Protected? Punished quite as certainly
 When Archons pleased to lay down each his law,
 Each season,—"No more naming citizens,
 Only abuse the vice, the vicious spare!
 Observe, henceforth no Areopagite
 Demean his rank by writing Comedy."

How penetrate incrusted prejudice,
 Pierce ignorance three generations thick—
 Since first Sousarion crossed our boundary?
 He battered with a big Megaric stone;
 Chionides felled oak and rough-hewed thence
 This club I wield now, having spent my life
 In planing knobs and sticking studs to shine;
 Somebody else must try mere polished steel.

But after all, his great quarrel is with the moral teachings of Euripides, rather than with his art. He himself loves and longs for the good old times, the life of unreflecting, animal happiness, when Athenians did not pose their brains with moral censures on the conduct of the gods, and useless inquiries after the highest good. This self-questioning and introspective age, represented by Socrates on the streets and Euripides on the stage—he cannot abide it. It is calling in question all the relative duties of life, and leading men to ask for the reasons of things which their fathers accepted with implicit reverence. Every Athenian of this new stripe is an accomplished sophist, full of questioning about life's plainest duties, and quite ready to decide those questions in the negative,—to decide not to pay their debts or support their aged parents, on the ground that there is so much to be said against such practices. He sees no way out of the tangle except the way that leads backward to the happy past—the past that he depicted in the *Peace*.

Home to the farm and furrow! Grub one's vine,
 Romp with one's Thratta, pretty serving girl,
 When wife's busy bathing! Eat and drink,
 And drink and eat, what else is good in life?
 Slice hare, toss pancake, gayly gurgle down
 The Thasian grape in celebration due
 Of Bacchos! Welcome, dear domestic rite,
 When wife and sons and daughters, Thratta too,
 Pour pea soup as we chant delectably
 "In Bacchus reels, his tunic at his heels!"
 What's my teaching but—accept the old,
 Contest the strange! Acknowledge work that's done,
 Misdoubt men who have still their work to do!
 Religions, laws and customs, poetries,
 Are old? So much achieved victorious truth!

And acting on this conservative principle, he finds plenty that is worthy of his club-censures—

..... So the thing
 Lay sap to aught that made Athenai bright
 And happy, change her customs, lead astray
 Youth or age, play the demagogue at Pnux,
 The sophist in Palaistra, or—what's worst,
 As widest mischief,—from the Theatre
 Preach innovation, bring contempt on oaths,
 Adorn licentiousness, despise the cult.

Mr. Browning is quite true to the history, in allowing Aristophanes thus to confound Euripides with those who reached only negative results in their questionings of established maxims and customs. Precisely, this is what the Comedian does in the picture he gives of Socrates in the *Clouds*;—he classes along with the sophists, the great antagonist of sophistry;—he puts among the mere doubters the man who

“doubted all men's doubts away.”

It was a sophistical age,—an age in which clever but unprincipled rogues like Gorgias and Hippias were the best and truest representatives of the popular drifts of thought. “The Protagorean saying that ‘the man is the measure of all things,’ was carried into men's practice only too faithfully Custom had lost its weight; laws were regarded only as an agreement of the majority; the civil order as an arbitrary restriction; the moral sense as the effect of the policy of the state in education; the faith in the gods as a human invention to intimidate the free power of action; while piety was looked upon as a statute which some men have enacted, and which every one else is justified in using all his eloquence to change. This is chiefly the point in which the sophistic philosophy came in contact with the universal consciousness of the educated class of that period.” (Schwegler.)

To Aristophanes nothing was satisfactory but an entire repudiation of the whole business of questioning and searching. Socrates—and in a different way, Euripides—was assured that when men asked and searched far enough they would reach far other conclusions than the sophistic negations. And when the Athenians had worked themselves up into a fit of old-fashioned virtue they put Socrates to death on the ground urged by Aristophanes.

Of course after this statement there is no longer any real ground for the discussion to proceed upon. Balaustion and her

antagonist feel that there is a great gulf between them; that they have no common standard of judgment, and therefore no standing-ground for amicable or profitable debate. She, as a Greek of the new era, is obliged to confess another and a different criterion of morals than the merely customary. He claims that custom is the highest sanction.

On one point she will grapple with him—that comedy is a thing of yesterday and not sanctioned by immemorial custom—not sanctioned therefore by the one standard which he accepts as final. And in those good old times the animal, unreflective life was not the only one; all that was worth telling in Greek history bore witness to the contrary. Had the old Greeks been the mere animals that he said, then Thermopylae and Marathon would have been impossible. Only in the age of Greek decay had the Greeks made the discovery that they were clever animals and no more.

But chiefly she holds up in clear and vigorous statements that moral ideal which he despises, applying it even to his own literary profession and depicting for him the ideal comedian who is also the master of the tragic art—a reminiscence of Plato's *Symposium* and a prophecy of Shakespeare. The Sophistry of the age is worthy of his hate, but has he not helped rather than hindered it?

Friend, sophist-hating! know,—worst sophistry
Is when man's own soul plays its own self false,
Reasons a vice into a virtue, pleads
"I detail sin to shame its author,"—not
"I shame Ariphades for sin's display!"
"I show Oporia to commend Sweet Home"—
Not "I show Bacchis for the striplings' sake."

Aristophanes retorts that abuse of him is not defence of Euripides, and asks what she has to say for her adored poet. And her answer is to read him the *Herakles Mainomenos*, the parting gift of Euripides to his priestess. The translation of this play—one of the less known of Euripides' works—fills a hundred pages of the book. It is not treated as was the *Alcestis* in the first "Adventure," but given with strict fidelity and almost literalness. Better judges than ourselves have pronounced it a masterly rendering—one unequalled in English literature.

The very year after Euripides' death the ruin of Athens'

political greatness was consummated by her capture by Lysander and his Spartans, and the razing of the long walls which united the Piræus-port with the city. The Spartan, as history tells us, enraged at some fickleness of the people, proposed to destroy the city itself, when a Phocæan—Euthukles himself, as our poet claims—interposed with a quotation from a Euripidean chorus—

Daughter of Agamemnon, late my liege,
Elektra, palaced once, a visitant
To thy poor rustic dwelling, now I come.

And, as we know, the appeal won the day—Euripides saved the Athens that had been laughing but a few months before at the buffoonery with which Aristophanes mocked his memory—

The assembled foe,
Heaving and swaying, with strange friendliness,
Cried "Reverence Elektra!"—cried "Abstain
Like that chaste Herdsman, nor dare violate
The sanctity of such reverse! Let stand
Athenai!"

Saved was Athenai through Euripides.

But while tragedy saved Athens from a worse fate, comedy assisted at so much of ruin as was inflicted on her; the Spartans ordered out the troop of dancing girls, whom Balaustion had shamed out of her house the year before, to help on the work of destruction with dance and song—

Those flute girls—Phaps-Elaphaion at their head—
Did blow their best, did dance their worst, the while
Spartè pulled down the walls, wrecked wide the works,
Laid low each merest mole-hill of defence.

So nothing is left for Balaustion but to go home to her Rhodes again. She has found in Athens the greatness that she sought, but found also a baseness and a littleness that she had not expected. The true Athens, the ideal of her youth, lives for her and for Euthukles still—a city of cloudland, where Æschylus, Sophocles, Euripides, Socrates, are the fitting citizens. With the false Athens—the hideous nightmare of reality—she is utterly disgusted and impatient. And so in the staunch old Rhodian ship that carried her once into Syracuse, and under the same old captain, she flies back over the Ægean to her native island, telling over again the story of that night with Aristophanes, as she sails.

So then the poem turns upon two contrasted modes of moral judgment, and two equally contrasted literary methods which grow out of the former. So far as the problem is a literary one, Mr. Browning evidently regards its solution as presented to us in the literary activity of Shakespeare—at once the greatest tragedian and the greatest comedian in the world's literature. That this was his leading idea in the original plan of his poem is very clear—equally so that he borrowed it from Plato's *Symposium*. When the morning sun shone in upon that worshipful company, and awakened Aristodemus, he found Socrates discoursing with Aristophanes and Ariston, and "insisting that the genius of comedy is the same as that of tragedy, and that the writer of tragedy ought to be a writer of comedy also."

But in the presentation of this theme Mr. Browning has raised other and deeper questions. He could not have contrasted Euripides with Aristophanes, and still have ignored them. Two ideals of life, each half true, while one is certainly far the nobler, here meet him at once, and the question for us is this: have these also been reconciled and brought unto synthesis? Does the literary unification of comedy and tragedy—of laughter and of tears—of a broad and genial humanity with a lofty ideal of purity—that meets us in Shakespeare's best work, represent and rest upon a deeper, a moral reconciliation of opposites effected by or for the modern world? Mr. Browning does not directly answer these questions, but we think that they were before his mind, and he has, by his very way of putting the contrast, suggested the answer. The utter and irreconcilable contradiction, the great and impassable gulf between the real and the ideal, the customary and the ethical, is one of the marked characteristics of ancient paganism, and has reappeared in modern times whenever paganism in thought and feeling has been revived within Christendom itself. This dualism, this contradiction, this false antithesis, faces us everywhere; it symbolizes itself in all the social and political relationships of men; it writes itself upon their art and their architecture.

But Christianity is in its very self the life and person of one who was the realized ideal of humanity—the Son of Man, in whom, as Pascal grandly says, "all contradictions are reconciled." And, therefore, all truly Christian morality has both body and soul

to it. It combines the most intense humanity with the highest spirituality. It takes hold of life's common relations, which Aristophanes felt that the sophists were grinding to powder, and confers a glory upon them that paganism never dreamed of. It consecrates the simple common joys and toils of men—their tears and their laughter alike. It's is "no retired and cloistered virtue" (Milton), but the worthiness of struggling and earnest men, busied amid life's duties, trying to bring God's kingdom and to do His will.

All paganism, its mythology and the lives of its best men, are full of unconscious prophecies of this brighter day. Socrates especially, in the curious though imperfect synthesis of contrasting qualities that made up his character, was such a foretaste of the better age—the new era. But Socrates and Plato could not prevent the lofty and ideal morality of their teachings from becoming in Iamblichus a base theurgy and in Plotinus a cold, barren cloud of profitless and inhuman abstractions. Far truer representatives of Socrates and of Plato were Christian theologians like Clemens Alexandrinus, Synesius and Augustine, because they started from a truth for which Socrates' whole life was a yearning.

We do not blame Mr. Browning for failing to state this side of the case; it would have interfered with the unity of the poem. He has given us enough, more than enough, of suggestion and thought in what he has written here. We only regret that his book will not reach a wider circle than it is likely to do. Its author makes great demands upon his readers, and never more than here—with the exception, perhaps, of *Sordello*. To follow exactly and intelligibly the argument of the poem requires a familiarity with the general historical background, with the character and plot of several of the tragedies of Euripedes, and with all the comedies of Aristophanes, besides a tolerable acquaintance with the special arrangements and rules which belonged to the presentation of the Athenian drama. But after all, *Aristophanes' Apology* is the only poem of first-class merit that has been added to the treasures of English literature during the present year; we cannot make an exception in favor of Mr. Tennyson's *Queen Mary*.

R. E. THOMPSON.

NEW BOOKS.

HISTORY OF THE PRESBYTERIAN CHURCH in the United States of America. By the [late] Rev. E. H. Gillett, D. D. Revised Edition. Two volumes. Crown 8vo. Pp. xxiv., 576, and xii, 605. Philadelphia: The Presbyterian Board of Publication.

When Dr. Gillett's history appeared some years ago, issued by the New School "Presbyterian Publication Committee," it was thought rather lively reading for irascible Presbyterians of the Old School, and while the publishers of the present edition are able to quote favorable opinions of the first edition from Old School organs, it was unquestionably received by them as a partisan publication, which rather hindered than helped the growing *entente cordiale* between the two Churches. It certainly made out a strong case for the general legitimacy of New School Presbyterianism, by showing that from the first the Presbyterian Church in the United States had been a composite body, with a Scotch and Scotch-Irish wing of rigidly orthodox and conservative character on the one side, and a more liberal and progressive body, partly of Yankee origin, and generally marked by sympathies with New England and its theological drifts, on the other. This had been the state of things when the old side and the new side divided into two churches on the questions raised by the Methodist movement in colonial times; and the division of 1837 was on substantially the same general lines as the earlier division, which had been followed by a reunion.

Years have elapsed since the second reunion, and now we have for the first time a revised edition of the history, with the old offences removed. The change in the tone of the book—we speak from recollections of the earlier edition, rather than from a fresh comparison—seems to us very marked, and perhaps the work has gained in merit as a history. A careful, if not a judicial, attitude is assumed in the story of the struggle which culminated in 1837, and the author gets over the *supposito cineri* very cleverly. He aims to put himself in the place of both parties, and to let both have a hearing, so that his New School sympathies are now subordinated to the larger interest of his Presbyterianism. But the new and peaceable edition is not quite so lively reading as the old warlike one was; and some very curious bits of history—as for instance, the full story of the relation of Princeton to the controversy—will have to be sought for in the old edition still.

As a piece of American ecclesiastical history, Dr. Gillett's book has very large claims to attention. In spite of the predominance of statistical matter in some chapters, it is eminently a readable

and interesting book, the only readable history of any American Church that has ever been printed. Furthermore, it has claims upon the attention of the students of the history of almost every American State, while of our own Commonwealth—to say nothing of our own city—it is really the only book that attempts to tell the story of one side of its early life—the Scotch-Irish settlement of the Central and Western counties. It is the history, to some extent, of the presence and influence of one of the greatest and most generally ignored elements in our nation's composition—the element that has given the nation more Presidents and more popular leaders than any other. It is, furthermore, the story of the close contact—during more than a century—of that with another of the great elements of our nation's *personelle*—the story of the cruces and the wars of the Yankees and the Scotch-Irish. And when the history of the country comes to be really written, and not merely declaimed about in the style of Bancroft and his school, the lasting and inexhaustible importance of that story will be felt.

But apart from all secondary interest, the history, well told, of any great branch of the Christian Church in America, should have great interest for any thoughtful man. We are only beginning to feel the importance of the ecclesiastical element in society, and to understand why it has played so great a part in the history of the Old World, and why no theory of the severance of Church from State suffices to keep Church questions out of politics. And the interest is certainly not diminished when the Church in question is one of the wealthiest, the strongest, the most respectable and the most conservative—besides being itself the most theological, and therefore in this regard, the most intellectual—of all our American churches.

But it is surely strange that the most theological of American churches has seen a reunion of its severed parts pleaded for and carried before the people on the grounds that theological issues had lost their vital interest for our times, and that the practical work of evangelization is the only thing to which the Church should direct her energies. The revival of interest in such questions on every side is even a worse omen for the future of the union than is the rapid and wide-spread formation of a Broad Church and "Revision of the Standards" party since the year of reconciliation.

THE HISTORY OF CO-OPERATION IN ENGLAND, ITS LITERATURE AND ITS ADVOCATES. By George Jacob Holyoake. Vol. 1. The Pioneer Period—1812 to 1844. Phila. J. B. Lippincott & Co. 1875. Pp. 419.

Mr. Holyoake is one of the leaders of a class not very large at any time, and now rapidly diminishing, who have made a very

good living out of their advocacy of the rights of the people. Unfortunately for them, the people have got their rights by the rapid succession of legislative enactments of late years, securing increased suffrage, popular education, protection of women and children from over-work, the safety of tenants' improvements, and one after another of the measures so earnestly and urgently asked for year after year by the proto-martyrs of the liberal cause. Much of the parliamentary work was done finally by the Tories under the guidance of Mr. Disraeli, and this fact, with his renewed tenure of office, has prevented the Liberals from duly rewarding their colleagues in the lower ranks, while it took away from the various classes of the Liberal party the occasion for quarreling among themselves, as to how much or how little should be done for the masses. While they were questioning one another as to the limit of necessary reform, the Conservatives coolly went to the furthest extreme and got themselves into power.

At this late day then, when the enormous importance of the early discussions as to the rights of the working classes is all forgotten and swallowed up in the actual fact of their present enjoyment of all, and more than all that was claimed for them, Mr. Holyoake comes forward with his *History of Co-operation*. Mr. Holyoake is no ordinary man,—a workingman who works his way forward and upward from actual manual labor, to the position of a leader among men, is undoubtedly deserving of all respect and admiration. It is true that even of those who sympathized with and encouraged his labors for the enfranchisement of his fellow workmen, many were shocked and pained to find that along with his advocacy of the rights of the people, he advocated his own right to be an atheist, and to preach his theology as part and parcel of his political creed. Punished for a violation of the laws on the one subject, he chose to make his imprisonment a reason for being heard and trusted on the other. Now after a long life of busy agitation, he has devoted his leisure to the preparation of a *History of Co-operation*, and the first volume, nominally covering the period of its organization, is before the public; we had been led to expect in it a perfect encyclopædia of information on the subject which is of such actual importance in the real advancement of the working classes, *Industrial Co-operation*. Unfortunately the performance bears no sort of relation to the promise, or at least to the expectation. *Co-operation* as it is known in England, in the great trading establishments so successfully planted throughout the Kingdom, not unlike the form in which we best know it here, our *Building Associations*—is a growth that has its success as its best reason for existence, but little or no account is given of its preliminary trials. What Mr. Holyoake means by the *History of Co-operation*, is little more than a bibliography of all the works printed by the successive schools

and apostles and disciples of various forms of social reform, preached by St. Simon and Fourier in France, and mainly by Owen and his following in England and in the United States. Undoubtedly this was all an interesting subject of study, and it is no doubt largely due to its discussion, that Co-operation is to-day practically successful in so many forms and shapes, but it is just because nowhere does the old notion of Co-operation remain alive, that instead of Phalansteries and New Harmony, and Brook Farms, we see the long list of great Co-operative stores advertised in the end of Mr. Holyoake's book, and our own daily increasing list of Building Associations. It is because the old forms have been cast aside and the substance really got at, that we can now fully appreciate the possibilities of the future for Co-operation in raising the working class to strength and influence.

All this Mr. Holyoake fails to see—his old habit of stump speaking is still too strong upon him, and after a brief account of the men and writings of the period of which he is writing his history, he breaks out into eloquent discussions of the abstract rights and wrongs of the working classes, that, barring a rather weak arrangement of his parts of speech, gives the notion of a man in admiration of his own gift of speech, and not much given to caring for other people. Indeed, apart from his persistent applause of the elder Owen, and all he did and said, his work is either mere declamation or it is abuse, open or covert, of the very men who worked with him through all the dreary years that preceded the revolution, for it is no less, that is now in its full vigor, in English legislation and sentiment and opinion, in the matter of workmen and their rights. We want a good history of the actual growth of co-operation as a fact, and instead of it, we have a mass of undigested opinions and exploded theories. Here in Philadelphia, the home of successful American co-operation, the disappointment is greatest, for success in treating the English story of co-operation, would undoubtedly have led to what we have as yet asked for in vain, a clear statement of the existing building associations of this city, with a summary of their actual condition and the prospect of future growth and success. There were years of vague discussion and passionate declamation on the part of those who urged on our workmen Co-operation as a means of self-elevation; but all that is past and gone—the work is accomplished, and now it is time to make full record of its progress that it may be extended, as in England, to other fields of industry and activity.

OPIMUM EATING. An Autobiographical Sketch. By an Habitué. Cloth 16mo. Pp. 150. Price \$1.00. Claxton, Remsen & Haffelinger, Philadelphia.

This little work is from the pen of a soldier of the Union,

whose physical system was broken down by the slow tortures of semi-starvation in Andersonville and other Rebel prisons. Returning to the North to find life made a burden by the complete derangement and almost paralysis of his stomach, he fell into the hands of a quack, who gave him large doses of morphia in hypodermatic injections, and thus was brought under the power of the most insidious of all drugs. He tells very clearly and very carefully the story of his sufferings before and after the habit was formed, and of his failures to emancipate himself from its control. He writes as one that abhors his slavery, but cannot emancipate himself from it; who has given up all hope of liberty, and tells the story of his captivity that others may be warned to preserve their freedom.

His acquaintance with the literature of the subject seems to be chiefly confined to De Quincey's *Confessions*, and he carries his hostility to that author so far as to hold a sort of brief in defence of Coleridge against his friend and asperser. He states from his own experience the reasons for denying that Coleridge owed anything but the decay of his poetical powers and the frequent interruption of his power of continuous thought to the drug. In his statements on this and some other aspects of the question, De Quincey, our author maintains, did not write of Opium and its effects on the mind, what he must have known to be true. We think our author is somewhat prejudiced and unfair to De Quincey. From a collection of such experiences published some years ago, under the title *The Opium Habit*, (by the only recorded victor over the habit,) it would appear that different persons are very differently affected by the drug, and our author's previous experience of prolonged semi-starvation was so exceptional in its character, that he is less qualified to speak of its ordinary effects than most of its victims.

The book should serve the good purpose its author has in view, by warning the unwary against a habit which we have every reason to believe is vastly on the increase among us, especially in those portions of the country where unwise legislation has greatly restricted the use of alcoholic beverages. The consumption of opium in the United States, as may be seen by the statistics of its importation, has advanced with fearful rapidity during the last thirty years, and threatens the virtual ruin of a large part of our people. Whatever tends to discountenance it, deserves the approval of all public-spirited people.

It is worthy of note that in two recorded cases, quack doctors or quack medicines were to blame for the formation of the habit. Coleridge began with the use of a mixture called "Kendall Drops," to relieve local pain and swelling, and went on in entire ignorance of the composition of the medicine, until the opium of which it was largely composed, had become a necessity to him.

BOOKS RECEIVED.

Historical Map of Pennsylvania, showing the Indian names of streams and villages and paths of travel, etc., etc. Edited by P. W. Sheaffer and others. Price \$1.50. Published by the Historical Society of Pennsylvania, 820 Spruce Street, Philadelphia.

Opium Eating. An autobiographical sketch. By an Habitué. Cloth 16 mo. Pp. 150. Price \$1.00. Philadelphia: Claxton, Remsen & Haffelfinger.

The Golden Tress. Translated from the French of Fortune du Boisgobey. Cloth, 16 mo. Pp. 420. Price \$1.50. Philadelphia: Claxton, Remsen & Haffelfinger.

Money and the Mechanism of Exchange. By W. Stanley Jevons, M. A., F. R. S. International Scientific Series. xvi. Price \$1.50. D. Appleton & Co. New York. [Porter & Coates.

The Taxidermist's Manual; or the art of collecting, preparing and preserving objects of Natural History. By Capt. Thos. Brown, F. L. S. Twenty-sixth edition. Pp. 150. New York. G. P. Putnam's Sons. 1875. [J. B. Lippincott.

The Big Brother, a story of Indian War. By George Cary Eggleston, Illustrated. Octavo. Pp. 182. Price \$1.50. New York. G. P. Putnam's Sons. 1875.

The Conservative Reformation and its Theology: as represented in the Augsburg Confession and in the History and Literature of the Evangelical Lutheran Church. By Charles P. Krauth, D. D. 16 mo. Pp. 840. Philadelphia: J. B. Lippincott & Co. 1875.

St. George and St. Michael. A Novel. By George Macdonald. Illustrated. 12 mo. Cloth. Pp. 552. Price \$1.75. New York. J. B. Ford & Co. 1875.

Homes and How to make them. By E. C. Gardner. Illustrated. Cloth, 12 mo. \$2.00. Boston. J. R. Osgood & Co. [J. B. Lippincott.

The Cultivation of Art and its relations to Religious Puritanism and Money getting. By A. R. Cooper. 25 cts.—Antiquity of Christianity. By John Allger. 35 cts.—Soul Problems, with other papers. By Joseph E. Peck.—Scripture Speculations. By Halsey R. Stevens. 12 mo. Pp. 419.—Health Fragments, or steps toward a true life. Embracing Health, Digestion, Disease and the Science of the Reproductive Organs, by Kappes, Spiegle & Treat. By George H. Everett, M. D. New York. 139 Eighth street. Charles P. Somerby. 1875. Claxton, Remsen & Haffelfinger.

Rocks Ahead; or, The Warnings of Cassandra. By W. R. Greg. 12mo. Cloth, \$2.00. Boston: J. R. Osgood & Co. 1875. [Porter & Coates.

The History of my Friends; or, Home Life with Animals. Translated from the French of Emile Achard. Illustrated. 12mo. Pp. 193. Price \$1.75. New York: G. P. Putnam's Sons. [Porter & Coates.

Notes of Travel in Southwestern Africa. By C. J. Anderssen. 12mo. Pp. 318. Price \$2.00. New York: G. P. Putnam's Sons. [Porter & Coates.

