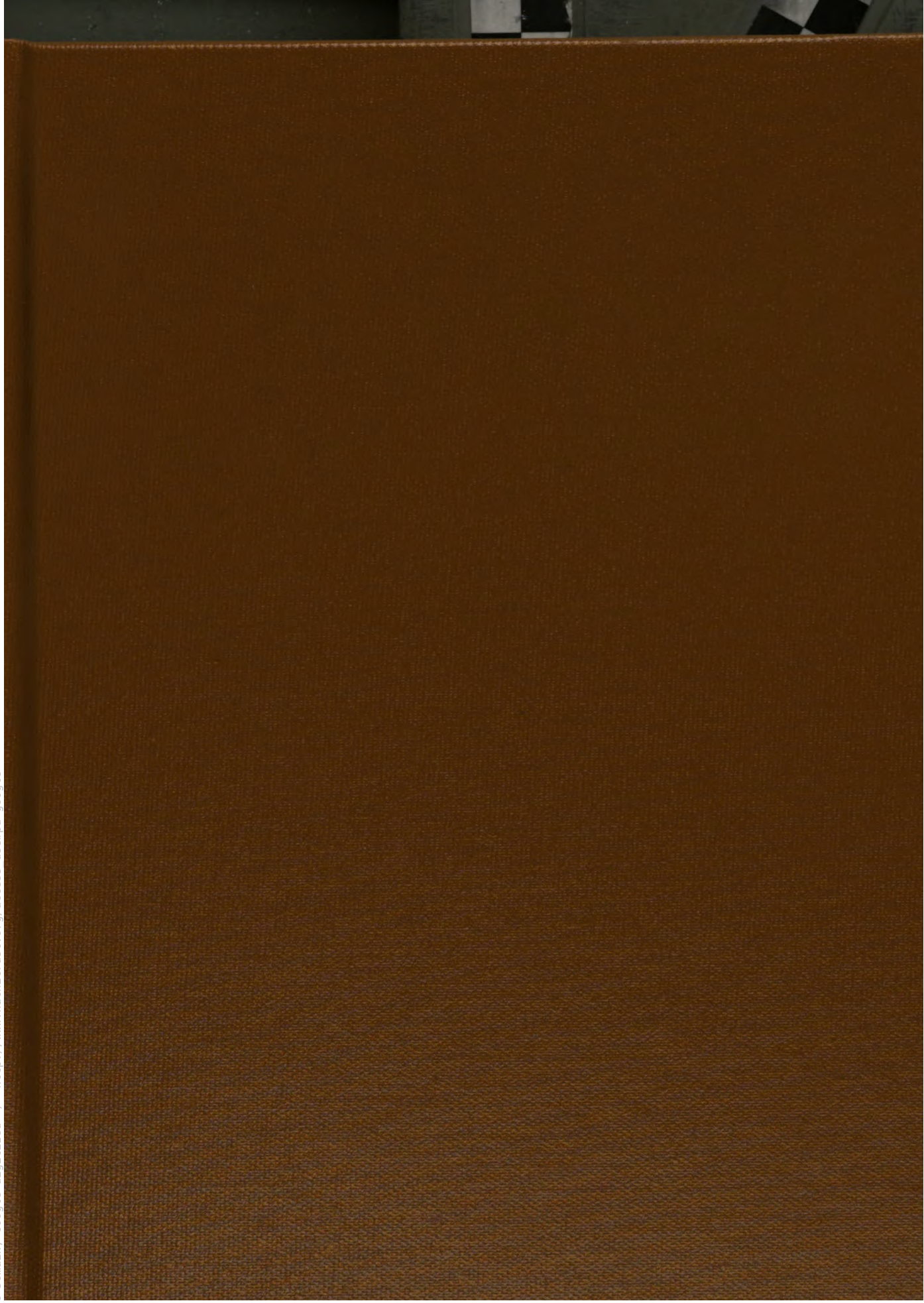
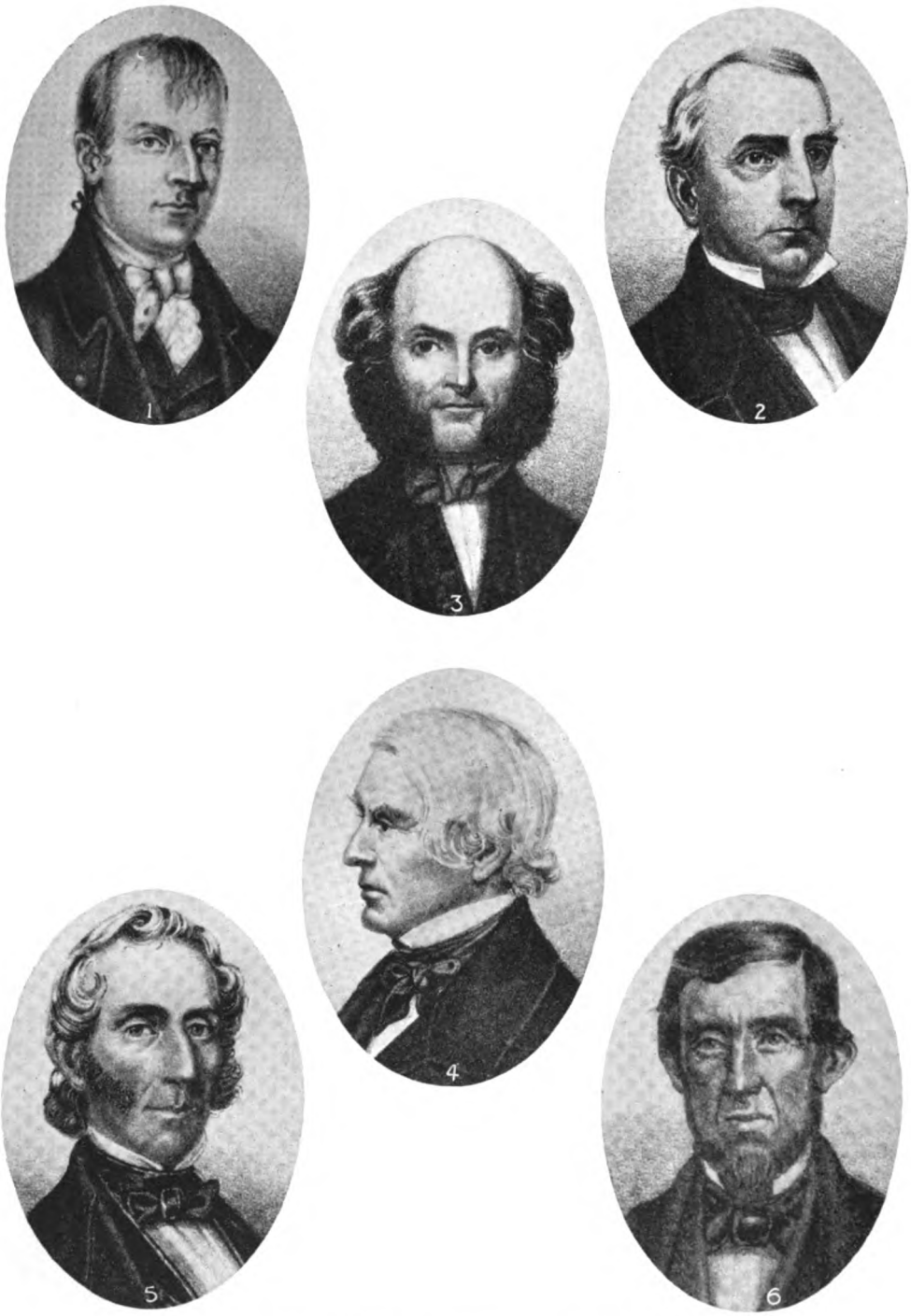


MEDICINE IN VIRGINIA
in the Nineteenth Century



EARLY PRESIDENTS OF THE MEDICAL SOCIETY OF VIRGINIA, FROM LITHOGRAPHS PUBLISHED IN THE STETHOSCOPE, 1854-1855

1. James Henderson. 2. Robert W. Haxall. 3. Frederick Marx. 4. Thomas Nelson. 5. W. A. Patteson. 6. John A. Cunningham.

MEDICINE IN VIRGINIA
in the Nineteenth Century

By
WYNDHAM B. BLANTON, M. D.

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MCMXXXIII

MANUFACTURED IN THE UNITED STATES

PREFACE

THE history of medicine in Virginia embraces three centuries. The periods from 1607 to 1700 and from 1700 to 1800 have been covered in two books already published. This volume is concerned with the period from 1800 to 1900 and completes the series.

Five years ago the Medical Society of Virginia directed Drs. Beverley R. Tucker, Frederick C. Rinker, and the author to find ways and means for the preparation of a history of medicine in the state. Since that time the author has had in generous measure the counsel and support of the members of his committee, who have seen fit to leave the actual preparation of the work in his hands. This undertaking belongs to the Medical Society of Virginia which initiated it and sponsored it. By generous annual contributions, and finally by underwriting the last volume the Society has made possible the completion of the work on schedule time.

In completing this commission the author desires to acknowledge assistance from many sources. For their generous response to appeals for information he is under obligation to Drs. Stuart McGuire, R. C. Bryan, Charles R. Robins, J. McCaw Tompkins, J. K. Hall, J. Morrison Hutcheson, H. S. MacLean, Beverley R. Tucker, R. W. Miller, W. T. Oppenhimer, W. Lowndes Peple, B. R. Wellford, Ernest Levy, Charles M. Hazen, W. T. Sanger, and Miss Ellen Bagby and Miss Susie Harrison of Richmond; to Dr. Joseph D. Collins of Portsmouth; W. M. Bowman, Wright Clarkson, H. C. Henry, and William B. McIlwaine of Petersburg; Drs. J. W. Preston and Blanton Seward of Roanoke; Dr. J. E. Rawls of Suffolk; Dr. Landon E. Stubbs of Newport News; Dr. I. C. Harrison of Danville; Drs. Frederick C. Rinker and J. D. McCormick of Norfolk; Dr. Hunter McGuire of Winchester; Drs. Mosby G. Perrow and Ernest G. Scott of Lynchburg; Dr. E. Pendleton Tompkins of Lexington; Drs. Paul B. Barringer, Lawrence T. Royster, and H. S. Hedges of Charlottesville; Dr. R. M. Wiley of Burkeville; Dr. Claude B. Bowyer of Stonega; Reverend Joseph F. Magri of Portsmouth; President J. D. Eggleston and Professor J. H. C. Bagby of Hampden-Sidney College; Dr. Douglas S. Freeman of Richmond; Mr. E. G. Swem of William and Mary College; Mr. James H. Corbitt of Suffolk; Mr. C. W. Wadsworth of Washington; Captain J. S. Woodward, U. S. N.; and Lt. Col. A. T. Cooper, M. C., U. S. A.; Miss Montez Wayne and Miss J. N. Ions

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of Petersburg; Miss Mary E. Marshall of Hampton; and Miss Fanny Carter of Alexandria. Drs. John Bell Williams and Harry Baer have collected valued information dealing with the development of dentistry, and Dean Wortley F. Rudd has been equally helpful in gathering material on pharmacy in the state.

The author is especially indebted to the Virginia State Library, to Dr. Henry R. McIlwaine and his assistants; to the Library of the Medical College of Virginia, to Dr. E. C. L. Miller and his assistants; to the Library of the Surgeon General and to Colonel Percy M. Ashburn; and to the Library of the Richmond Academy of Medicine.

The Medical Society of Virginia is under lasting obligation to Mrs. Ralph T. Catterall, who has assisted the author in the preparation of this as well as the preceding volumes. A final acknowledgement is due one to whose help and counsel more than to anything else can be attributed the completion of this undertaking.

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MEDICINE IN VIRGINIA
in the Nineteenth Century

CHAPTER I

THE NINETEENTH CENTURY

UNPRECEDENTED progress marked all phases of human endeavor during the Nineteenth Century. With the substitution of steam, electricity, and mechanical appliances for manual labor, the exaltation of the individual, and his political emancipation, the human race became more and more the master of its environment, enjoying hitherto unheard-of comfort, security, happiness, and health. Not unnaturally these changes were attended by phenomenal strides in medicine. The resulting decrease in physical suffering was "the Promethean gift of the century to man."[1]

The pathological approach to medicine, stimulated by the earlier researches of Giovanni Morgagni, was given fresh impetus in 1801 by François Bichat's work on general anatomy, in which he placed emphasis on the tissues rather than on the organs in the study of morbid processes. From this time on pathology became more and more the basis upon which clinical progress was grounded. At the beginning of the century all eyes were focused on France. Here François Broussais's antiphlogistic system continued unchallenged until it was shattered in 1835 by the calm reasoning of Pierre Louis, whose statistical approach to medicine did much to dispel the confusion surrounding the continued fevers and gave the first clear differentiation of typhoid fever as a clinical entity. The great clinician of the period was René T. H. Laënnec, whose careful comparisons of necropsy findings with clinical manifestations advanced the science of physical diagnosis to a position of impregnable importance. Jean Corvisart's translation of Auenbrugger's *Inventum Novum* and his popularization of percussion as a method of diagnosis was a forerunner of Laënnec's invention of the stethoscope and description of the physical signs elicited by it in diseases of the heart and lungs. Both men gave tremendous momentum to clinical investigation, while further lustre was added to the practice of internal medicine in France by their contemporaries, Andral, Bayle, Bouillaud, Bretonneau, Pinel, and Ricord.

The influence of these achievements in France was soon felt in Great Britain, and an Irish school of great brilliance shortly attracted attention through the work of such men as John Cheyne, Robert Adams, Robert Graves, and William Stokes. An equally conspicuous English school of practical clinicians boasted the contributions of James Parkinson, Thomas Hodgkin, Thomas Addison, and

[1] Sir William Osler.

Richard Bright, whose investigation of diseases of the kidney forms the basis of our modern conception of nephritis.

At the same time, also, our knowledge of anatomy was advanced by the work of Sir Charles Bell, Robert Knox, and Sir Richard Owen. Physiology was enriched by the contributions of François Magendie and the researches of Johannes Müller, whose investigations of voice production, the mechanism of hearing, color perception, nerve impulse, and other equally important subjects were an inspiration to such exceptional pupils as Schwann, Henle, Virchow, and von Helmholtz. Early Nineteenth Century surgery was in the hands of a group of men who wisely combined anatomical dissection and teaching with surgical practice—in Scotland, Robert Liston, James Syme, and William Fergusson; in England, Benjamin Travers, Benjamin Brodie, and Sir Astley Cooper, "who filled so large a place in the public eye"; in France, Guillaume Dupuytren, Dominique Larrey, Alfred Velpeau, Joseph Malgaigne, and Auguste Nélaton; in Germany, Carl von Graefe, Johann Dieffenbach, Georg Stromeyer, and Bernhard von Langenbeck.

The introduction of surgical anæsthesia by the Americans, Long and Morton, in the early forties, had far-reaching effects. Up to this time surgery had been a cutting-and-slashing business, requiring the utmost fortitude on the part of the patient and demanding preëminently speed and boldness on the part of the surgeon. The new anæsthetic agents converted a writhing human being into a sweetly sleeping subject, and for the first time made technically possible more deliberate methods, painstaking dissection, careful exploration of the abdomen, chest, and head, as well as the repair and removal of diseased viscera.

Medicine rests its case as a science almost entirely on the accomplishments of the latter half of the Nineteenth Century. During this brief period advances were made which exceed in magnitude all previous progress from the beginning of time. The great awakening was directly attributable to experimental investigation. Striking examples of the effectiveness of the method were observed long before in the contributions of Galen, Harvey, and Hunter, but it remained for the Nineteenth Century to witness the phenomenal results following in the wake of research employed on a wide scale. Untrammeled by theories and schools of thought, laboratory workers everywhere, through physical, chemical, and biological experiment, questioned Nature herself to a degree never before attempted. Physiological, pathological, and bacteriological laboratories relentlessly sought additions to knowledge in many related fields. Through research, the vital functions of respiration, circulation, digestion, and assimilation became well understood; a flood of new light was thrown upon

the anatomy and physiology of the brain, cord, and nerves; and correlations of morbid anatomy, microscopic pathology, and clinical manifestations of disease brought new facts to view. Probably the greatest advance of all occurred in the new science of bacteriology which sprang up at this time.

To research in this field more than to anything else we owe the marvelous advances of the latter decades of the century. Louis Pasteur sounded the death knell of the spurious doctrine of spontaneous generation in 1862. To his colossal intellect more than to any other is due the present germ theory of disease. Robert Koch perfected our methods of bacteriological study, and with other brilliant workers in a short decade established the microbic cause of anthrax, leprosy, tuberculosis, diphtheria, typhoid, cholera, tetanus, pneumonia, and plague.

Not less important was the demonstration, chiefly by Pasteur, that the pyogenic organisms—the streptococcus and the staphylococcus—were the chief causes of wound infection and sepsis. It was this knowledge in particular which Joseph Lister seized upon, and out of it came antiseptic surgery. To this discovery almost entirely was due the surgical advances which from this time on followed one another with amazing rapidity. Modern medicine as well as modern surgery is largely a product of the bacteriological discoveries of the period. In the diagnosis and treatment of infectious diseases medical knowledge since that time has been revolutionized.

One of the by-products of this new science is preventive medicine, out of which have come the great public health movements for the control and eradication of epidemic diseases. With this knowledge the incidence of tuberculosis and venereal disease has been greatly reduced, and smallpox, yellow fever, plague, cholera, typhoid, typhus, and puerperal fever have been largely eradicated from civilized countries.

Another ramification of experimental investigation in this direction led to a better understanding of the phenomenon of immunity to disease and the vast possibilities of vaccine and serum therapy. The application of these discoveries has marvelously reduced the death rate in hydrophobia, typhoid fever, diphtheria, meningitis, and pneumonia. In response to both public approval and the exigencies of the situation a great multiplication of specialists in all sorts of diseases occurred. While not unattended with abuses and dangers, the movement was a necessary outcome of the accumulating store of medical knowledge, far exceeding the ability of any one man to master.

No account of the medicine of this century would be complete without some tribute to the far-reaching influence of Florence Nightingale and the trained

nurse she gave to the world. The speedy acceptance of her plan and the rapid spread of nurses' training schools everywhere are the best evidence of the value and permanence of her contribution.

In America medicine continued to be much under European influence, foreign journals and foreign textbooks were popular, and an education abroad was still highly prized. To France first, later to Germany, went many of our American medical students. Not until later in this period was the full autonomy of American medicine established. Before the end of the century, in addition to the remarkable accomplishments of such men as Valentine Mott, William Beaumont, Oliver Wendell Holmes, William W. Gerhard, Crawford Long, W. T. G. Morton, Henry I. Bowditch, Walter Reed, and others, this country had taken the lead in gynecology, ophthalmology, and dentistry. American medical journals became more numerous than those of any other country, and American medical schools fast assumed positions of preëminence; while the magnificent benefactions of such men as Johns Hopkins, Pierpont Morgan, Vanderbilt, Sims, and Sloan made possible as never before the scientific investigation and treatment of disease.

In Virginia, until the Civil War, medicine was what it always had been, a dignified and respected profession, followed by men of good breeding and education, trained largely at the North and in Europe, but none the less wedded to antique theories and possessing a strange veneration for authority. Laboring under the blighting handicaps of war, the Reconstruction period, and poverty, Virginia naturally lagged in medicine after 1860. Yet, in spite of difficulties in the publication of medical journals and in the maintenance of medical schools, and in spite of the utter lack of endowed institutions for research, the progress of medicine went on.

In time medical societies sprang up, hospitals were organized in every town of importance, trained nurses came to stay, the new gospel of sanitation was preached, a state examining board and a state board of health were organized, specialism became popular, dentistry came into its own, better medicine flourished, and a higher order of surgery developed.

CHAPTER II

THE RISE OF THE MEDICAL COLLEGES

I

PRIVATE instruction in medicine had gone on in Virginia from the earliest times. Well into the period when there were several recognized medical schools in the state, apprenticeship was popular and accepted by the colleges themselves as satisfactory preliminary study. The roll book of the Medical College of Virginia up to the time of the Civil War, in addition to giving the name of each student, records the name of his former preceptor. The list is a long one, and is an important record of this feature of early medical teaching in the state.

Shortly after the beginning of the century groups of physicians in a number of localities began to organize schools for private instruction in medicine. Several professed to do no more than give preliminary work, while others were more ambitious and offered courses designed to fit their graduates for the immediate practice of medicine. One of the earliest was proposed in Norfolk. Here, on July 17, 1812, Drs. John Hodges, Lewis Hansford, and J. F. Oliveira Fernandes announced their intention of opening on October 1:

"A General Course of Lectures on the different branches of Medicine and Surgery, provided the number of Applicants should exceed twelve. . . . [They] sincerely wish and earnestly request their Brother Physicians resident in this place to assist them in their laborious task.

"The plan of Studies will be rendered public as soon as it shall be ascertained whether any assistance is to be expected from their colleagues.

"The subscribers have reason to expect, that, their assiduity, will encourage the members of the Legislature, to improve the plan, and create an establishment worthy of their wisdom and patriotism."[1]

The advertisement ran for a good many weeks, but nothing appeared which would indicate that the course was actually given.

On October 9, 1835 the Richmond Medical School was advertised to begin lectures at the end of October. The faculty was to be composed of Thomas Johnson, teaching anatomy, physiology, and surgery; James Beale, practice of physic and the institutes of medicine; Robert Briggs, materia medica, thera-

[1] Norfolk Gazette and Public Ledger, July 17, 1812.

peutics, and hygiene; Robert W. Haxall, midwifery and the diseases of women and children; and a professor of pharmacy and chemistry, to be announced later. Formal lectures were to be given daily, with clinical instruction at the almshouse, where students were to learn how to "feel the pulse and apply the Stethoscope." Practical anatomy would be taught every evening, and one of the faculty had taken pains to collect in Paris the necessary anatomical and surgical models. A fee of twenty dollars was charged for each ticket.[2]

In 1844 Dr. Augustus L. Warner advertised a "scheme for private Medical Instruction" with a two-year course including lectures, examinations, and clinical instruction. In this way he hoped "to remedy the existing defective system of elementary medical instruction."[3]

In 1847 Drs. Warner, Carter P. Johnson, and James H. Conway advertised a five-months' course of "Private Medical Instruction" to begin in Richmond on March 15.[4] In 1857 A. E. Peticolas organized another private medical school in Richmond, known as the Metropolitan School of Virginia. A winter course of five months was given in his own office on Governor Street, "in Morson's Building, under Dr. Wm. B. Pleasants, Dentist." Peticolas proposed to give "private instruction in the elementary departments of Medicine." His students were promised "access to a good Library, as well as a fine collection of Anatomical Plates, and may also witness the Surgical operations performed at the Alms House and College Infirmary."[5]

Private instruction was offered in other localities. John Peter Mettauer conducted a successful school in Prince Edward County. In Petersburg, in 1852, John F. Peebles, J. H. Claiborne, and N. F. Rives formed an association for the same purpose. A prospectus of this school[6] reads:

PRIVATE MEDICAL INSTRUCTION IN PETERSBURG

In accordance with a recommendation of the American Medical Association, the undersigned have associated for the purpose of giving private instruction in medicine.

They are prepared, by an appropriate Library, by Models, Drawings, Preparations, Specimens, Dissections, &c., to teach and illustrate the elementary branches of Medicine and Surgery.

They have at command resources sufficient to enable them to impart the necessary practical information as regards the observation of disease. Particular

[2] Richmond Enquirer, October 9, 1835.
[3] American Journal of the Medical Sciences, advertisement, 1844, v. 8.
[4] Richmond Enquirer, March 2, 1847.
[5] Richmond Examiner, March 20, 1857.
[6] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 38. Advertisements of the course appeared during 1852.

attention will be paid to Physical Diagnosis, as variously applied by modern Pathologists—auscultation and percussion illustrated on the healthy and diseased subjects.

A city residence affords to the student of medicine facilities for the prosecution of his studies which cannot so well be obtained elsewhere. It presents a greater variety of disease, and concentrates matters of general medical interest.

No student will be received who has not complied with the recommendation of the American Medical Association in reference to Preliminary Education.

Students received after the 1st of February, 1852.

Terms for a course of twelve months, $100.

In January 1853 the *Stethoscope*[1] announced that the Petersburg Primary Medical School had begun its second session. The school soon fell to pieces, due to the failing health of Dr. Peebles and the digression of Dr. Rives into the real estate business and of Dr. Claiborne into politics.

Petersburg had less reason to be proud of another school, called the Montaeri Hospital and Medical, Classical and Scientific Institution, whose prospectus appeared early in 1831. Buildings had been secured eight miles from town, and the opening was planned for January 15. That it was a scheme of the irregulars can be seen from an advertisement that appeared in the Richmond *Enquirer*. In addition to promising "no cure, no pay" to all prospective patients and making a feature of galvanism, electricity, and vapor baths in treatment, the teaching side of the proposed institution was emphasized:

"Eight or ten medical students would be taken, if early application be made, at $100 per year, payable quarterly in advance, unless a specific bargain be made to the contrary. This includes expenses for board, washing, lodging, instruction in all the sciences connected with the study of medicine, use of library, museum, etc. Should any be disposed to prosecute, at the same time, the study of the languages, mathematics, or any of the sciences unconnected with medicine, facilities will be provided—but, in such an event, they will be subjected to an additional charge of $25 per year.

"The advantages of this Institution are, first, its location, which is proverbially healthy: while the surrounding country is remarkably the reverse—Secondly, its proximity to two large and flourishing towns, which afford an opportunity of gaining early intelligence of improvements in the science of medicine, and of consulting occasionally with many of the most distinguished medical gentlemen of the present age—Thirdly, the absence of all the usual lures of vice; fourthly, the facilities it will afford the student of frequently testing among the poor his medical knowledge—and lastly, the multiplied opportunities that will be furnished of practical demonstrations in anatomy.

[1] Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 107.

"Should any young gentlemen conclude to prosecute their studies at this institution, they would do well to commence as early as practicable, as the subscriber expects to perform, in a short time, the following important operations—

"An operation on the eye for Pterygium.

Do do Ectropium.

"An amputation.

"An operation for the extirpation of diseased ovaria—an operation which but rarely falls to the lot of a physician to perform.

"Application may be made to the subscriber personally, or through the medium of the Post Office, Petersburg.

"Montaeri, Jan. 1. Jos. S. BAKER."[8]

It is doubtful if this educational plan of the irregulars ever reached maturity. The newspaper publicity given it was of short duration. It was similar to a later Petersburg establishment known as the Scientific Eclectic Medical Institute, whose charter, dated March 8, 1847, constituted "George Rogers, Jonathan B. Stovall, Nathaniel Mason, J. W. Redd, G. W. Redd, C. Hornsby, Benjamin Bridgforth, A. O. Davis, M. W. M'Craw, H. M. Price, C. J. Kenworthy, Walker Timberlake, T. Pleasants, George B. Casey, John M. Moody and their successors (who shall never at any time exceed 15 in number) . . . " a body politic and corporate. Five members constituted a quorum to prescribe courses of study, engage and discharge professors, and confer the degree of Eclectic Doctor.[9] The future history of these irregulars is not known, but the school, with hospital attached, had been operating for a year when the act of incorporation was passed.[10]

Extramural medical instruction went on in Richmond long after the Medical College of Virginia was established. A summer school was encouraged and supported by the College itself. For fifty years this type of instruction was carried on under various designations—in 1858 as the Richmond Association for Medical Instruction, in 1867 as the Summer School of Medical Instruction in Connection with the Medical College of Virginia, in 1872 as the "spring and summer course of the adjunct faculty," in 1886 as the "spring course of practical medicine." As late as 1892 it was announced that Lewis Bosher and Charles A. Blanton would give a "practical course in medicine and surgery during the summer months." At the University of Virginia special provision was made to allow the professor of medicine to teach private pupils. There is no record that the privilege was used.

[8] Richmond Enquirer, January 1, 1831.
[9] Boston Medical and Surgical Journal, 1847, v. 35, p. 486. Acts of the Virginia Assembly, 1846-'47, p. 154.
[10] Richmond Enquirer, May 8, 1846.

II

American medical education made startling strides during the Nineteenth Century. From a single institution in 1765 the number of medical schools had risen to 160 in 1900, some of them good, some of them bad, many of them worthless. Charters were easily secured, candidates were abundant, and there were few examining boards to bar the way to public preferment. Under these conditions medical schools—many of them flagrant diploma mills—multiplied rapidly. At one time Illinois boasted of fifteen schools, Tennessee of ten, Maryland of eight, and Kentucky of seven.

This did not come about without repeated warnings and violent protests from many sources. The American Medical Association, the state societies, the associations of the better colleges, labored strenuously to purge the ranks and raise the standards. In 1848 the American Medical Association recommended that the medical course be extended from four months to six, that every school have as many as seven professors, and that dissection and clinical opportunity be stressed. In 1860 the Association and representatives of twenty-one medical colleges adopted resolutions favoring more attention to preliminary education and better clinical facilities. Protesting against the crowding of courses, they demanded that at least three months intervene between sessions. The great reform, however, did not come until 1907, when the American Medical Association graded the colleges upon their preliminary educational requirements, character of curriculum, physical equipment, clinical facilities, number of full-time professors, and the extent to which profit to the faculty entered into the operation of the schools. The merciless publicity of the Association's figures rapidly raised the standard of medical education in this country, so that by 1925 only eighty schools survived.

In Virginia there were no medical schools during the first quarter of the century. Apprenticeship was popular, as it had been in the preceding century. A medical education in England and France was still highly regarded, and the few who could afford it crossed the seas for study. The majority of Virginia students, however, looked to the schools of the North for their education. An occasional student went to New York, a number to Baltimore. Most found their way to Philadelphia, where at both the University of Pennsylvania and Jefferson Medical College Southern students formed a considerable proportion of the student body. A detailed study[11] of this trend has shown that up to 1860 there were 5,501 graduates in medicine from the University of Pennsylvania,

[11] Miller: The Physicians of the Old South, their Character and Education, in Medical College of Virginia Bulletin, 1929, v. 25, p. 9.

and that of this number 4,254 were from the South. Jefferson Medical College graduated 4,444 physicians before 1860, and of this number 2,587 were from the South. In other words, of the 9,945 graduates of medicine in both schools, 6,841 were from the South, approximately sixty-eight per cent. Of the University of Pennsylvania's Southern graduates, 1,749 were from Virginia and 649 from North Carolina—more than one-half the total. A similar proportion of Virginians graduated from Jefferson.

Among the graduates of the College of Physicians and Surgeons, New York, in 1819, there were nine from Virginia and but fifteen from New York. That same year the graduating class of the University of Pennsylvania contained thirty-seven Virginians and twenty-one Pennsylvanians. Between 1812 and 1862 there were 311 Virginia students in the medical department of the University of Maryland.[13] In 1819 five Virginians were graduated there.[14] In 1826 fourteen Virginians received their degrees: Abraham B. Hooe, Alfred Lewis, Joseph H. Downman, John Morris, William F. Patton, George W. Harris, James Watson, George P. Jacob, Robert W. Haxall, Albert G. Hudgins, Walter M. Wickham, Benjamin F. Stewart, Charles Pottie, Haynes McKay. At the same time the honorary degree of Doctor of Medicine was conferred on Dr. J. B. Tilden of Virginia.[14]

In 1826 the following Virginians graduated from the University of Pennsylvania: Gustavus R. B. Horner, Burton B. Wright, Samuel Mosely, William R. Taylor, John H. Griffin, James Keen, George T. Hutchings, John A. Cunningham, George August Sykes, George A. C. Barham, David Bowman, John N. Faulcon, William Shultice, John Jefferson Hall, Mason Locke Weems, William L. E. W. Fauntleroy, Joshua Nicholas, St. Pierre Shackelford, Thomas J. Adams, Walter Somerville, Alexander Copland, William Alexander Spark, Richard A. Urquhart, Francis T. Meriwether, Alexander W. Tennent, Leven Luckett, Jr., Thomas C. Overton, Hugh Wilson, John Ingles, Jr., Thomas Meaux, George Terrill, and John Hunter.[15] The honorary degree of M. D. was conferred on Mr. Peter M. Hardaway of Virginia.[16]

In 1841, out of a class of 109 at the University of Pennsylvania, thirty-six were from Virginia. They were Henry Ashton, with a thesis on *Intermitting Fever;* Monro Banister, *Puerperal Fever;* W. H. Batte, *Dysentery;* Walter A. Brown, *Cynanche Trachealis;* P. H. Christian, *Disease of Kidney;* Daniel Conrad, *Acute Gastritis;* W. T. Cornick, *Scarlatina;* R. W. Dailey, *Amenorrhœa;*

[13] William and Mary Quarterly, v. 15, pp. 242-245.
[14] American Medical Recorder, 1819, v. 2, p. 310.
[14] American Medical Recorder, 1826, v. 10, p. 223.
[15] Total, 32. This was more than from any other state except Pennsylvania, which had 36.
[16] American Medical Recorder, 1826, v. 10, p. 221.

J. J. Gravatt, *Scarlatina;* A. W. Graves, *Hæmatemesis;* J. W. Green, *Fractures;* W. H. Gwathmey, *Bilious Remitting Fever;* S. P. C. Henkel, *Aneurism;* J. A. Hunter, *Theory of Menstruation and Amenorrhœa;* Josiah N. Jones, *Intermittent Fever;* Richard Kennon, *Means of Easing the Pains of Parturition;* Josiah Manry, *Acute Gastritis;* David E. Meade, *Emotional Tears;* John H. Mettert, *Leucorrhœa;* Lewis A. Miller, *Scarlatina;* Hollowell Old, *Peritonitis Puerperalis;* Mann A. Page, *Scarlatina;* W. P. Palmer, *Irritable Uterus;* E. H. Pritchett, *Metritis;* Thomas C. Revely, *Neuralgia;* Moore Robinson, *Pathology and Symptoms of Pneumonia;* William W. Roper, *Amenorrhœa;* William Strother, *Dyspepsia;* John G. Tannor, *Acute Gastritis;* F. O. Tompkins, *Menstruation;* Robert B. Tunstall, *Delirium Tremens;* James A. Waddell, *Iodine;* Richard P. Walton, *Arsenic;* Francis West, *Iron;* John F. White, *Prolapsus Uteri;* and John J. Wright, *Fractures.*

In 1841 a class of fifty-nine at Jefferson Medical College contained twelve Virginians: Horace D. Ashton, writing on *Cynanche Trachealis;* Robert S. Beazley, *Hepatitis;* Agrippa N. Bell, *Spermatorrhœa;* James D. Browder, *Necrosis;* James E. Ford, *Endocarditis;* Clement R. Haris, *Cynanche Trachealis;* John W. Irby, *Venesection;* Charles May, *Compression of the Brain;* Gerrard F. Mason, *Physiology of the Liver;* John M. Nunn, *Parturition;* Thomas W. Shelton, *Tight Lacing;* and Gillet F. Watson, *Inflammation.*[17]

William Bolling, a Virginian and a professor in the University of Nashville, in 1853 explained the peculiar attractiveness of the Philadelphia schools in a lecture to his class; and the *Stethoscope,* publishing his remarks, added to them a plea for the establishment of a state medical school in Richmond in order to make that city the "great medical centre of the South" and to end the constant flow of Southern students to the Northern schools. "Even her [Philadelphia's] hospitals are not superior to those of New York and Boston," Bolling said, "and there is but a single reason why she has heretofore kept in advance of her Northern rivals. The head of her school for nearly half a century was a Southern man, and around him clustered Southern students; and the excess of the classes of Philadelphia, as the annual catalogues demonstrate, over those of her Northern rivals, consists exclusively of Southern students. A single Southern state, the Old Dominion, for a great number of years, for this reason, furnished so great a number of her classes, that in the city a medical student, it was taken for granted, was a Virginian. . . . While I would be second to none in subscribing to the genius and talents of Benjamin Rush, I have often smiled when I have heard distinguished medical men ascribe the early éclat and the subse-

[17]American Medical Intelligencer, new series, 1842, v. 1, pp. 195-196, 224.

quent glory of the great Philadelphia school of medicine to him. Why, that school, with no rival and Rush at its head, was twenty years at work before it succeeded in numbering as many students as we now this day have in Nashville, at the commencement of our second session! And never until she introduced a Southern element of force to become the nucleus of Southern students, did she surpass our present class. With all the advantage which results to her from the students of her numerous alumni, when the magic of her Southern head has disappeared from the horizon, she cannot hope to surpass Boston or New York. The heads of her three great chairs of the practice of medicine, surgery, and anatomy, were from Maryland and Virginia—and true to her interest, she has recently filled the chair of chemistry, vacated by death, by the appointment of a distinguished gentleman of the University of Virginia. Her great rival, the Jefferson Medical College, which sprang up beneath her shadow, after years of struggle for existence, in imitation of the example of the University, finally looked to the South for help. She drew from the South the heads of the three great chairs of the practice of medicine, surgery and obstetrics, besides the professor of the institutes from the University of Virginia. Her struggle was soon at an end—she immediately gained upon and absolutely passed the great University of Pennsylvania, the first medical school in America. Each of these great schools have four professors from the South, and the three States of Virginia, Maryland and Georgia have furnished the whole number. These facts solve . . . the problem of the triumph of Philadelphia over all Northern competition. Her catalogues show that her students, like her professors, are from the South."[18]

What was apparent to William Bolling in Tennessee was galling to physicians in Virginia, who had repeatedly tried to put medical education in the state on a better footing. A medical department was early attempted at William and Mary. The medical department of the University of Virginia, the Winchester Medical School, and the Medical Department of Hampden-Sidney in Richmond were all organized with the idea of stemming this tide of Southern students toward the North. No one can read the early catalogues of the medical college in Richmond, for example, without sensing how earnestly Virginia teachers of medicine sought to persuade Virginia students to stay at home. Annually they set forth the advantages of studying in Southern schools, where attention was given to such peculiarly Southern problems as malaria and diseases believed to be peculiar to the Negro. Until the last decade of the century such arguments had little effect for, as an editorial writer in 1854 asserted, "The

[18] Stethoscope and Virginia Medical Gazette, 1853, v. 3, pp. 468-476.

attractive pleasures of large cities, the prejudice of physicians which sends their pupils to the institution in which they themselves were taught, the traditional excellence and sound doctrine of the 'old school' of Philadelphia, the rhetorical and operative display and facilities for obtaining diplomas at 'the Jefferson,' and the clinical advantages which, according to the 'Stethoscope,' are enjoyed by students in New York . . ."[19] were too compelling to be resisted.

III. WILLIAM AND MARY AND MEDICAL EDUCATION

Three separate attempts have been made at William and Mary College to teach medicine. The first dates back to 1779 when a reorganization of the faculty brought James McClurg to a newly created chair of anatomy and medicine. For three years he held this position and then moved to Richmond. As the records of the college have been lost for this period, it is impossible to learn how much teaching was done by McClurg or why the chair was discontinued when he left.

The next approach to a department of medicine was made in 1824. The fortunes of the college were at low ebb—the patronage of the school had seriously fallen off, and only radical measures promised to restore lost prestige. John Augustine Smith, M. D., president of the college, proposed the bold plan of moving the institution to the state capital in Richmond. He conceived of a great university with departments of theology and medicine, and he went before the legislature with his plans. Part of his testimony before the committee on schools and colleges reads:

"A medical school would be organized and attached to the College, and the theological school might be reunited to us.

"The medical school in New York . . . consists of about 200 pupils; that in Baltimore of rather more, while Philadelphia has upwards of 400; of these two last, a very large proportion are Virginians; and many . . . would remain in their own State had they an opportunity of doing so. . . ."

The medical and theological students "would give utility, dignity, and importance to the institution . . . and by increasing the reputation of the College, thus augment indirectly our fortunes."[20]

This scheme was well thought out and would probably have meant much for medical education in Virginia, but there were powerful objectors in the persons of Thomas Jefferson and Joseph C. Cabell. Cabell wrote to Jefferson: "A scheme is now in agitation at this place, the subject of which is to remove

[19] Virginia Medical and Surgical Journal, 1854, v. 3, p. 87.
[20] Journal of the House of Delegates of Virginia, session of 1824-25, Appendix.

the College of William and Mary to the city of Richmond. All the professors of the college, except the professor of law (Judge James Semple), are decidedly in favor of it. Chancellor Brown and others, of the Board of Visitors, will give it their support. . . . It will unquestionably be attempted, and will be powerfully supported. . . . The clergy, the Federal party, the metropolis, and probably the faculty of medicine throughout the State, will advocate the removal."[21] On December 17, 1824 Cabell again wrote Jefferson: "The hostile party in Richmond and the College aim decidedly at a great institution connected with a medical School." Jefferson recognized the full significance of the situation. He knew full well that it meant the ultimate defeat of his own cherished project of a state university at Charlottesville. He replied to Cabell, December 22, 1824: "The proposition to remove William and Mary College to Richmond, with its present funds, and to add to it a medical school, is nothing more nor less than to remove the university also to that place; because, if both remain, there will not be students enough to make either worthy the acceptance of men of the first order of science."[22] Such opposition was sufficient to kill the project, and the proposals of Dr. Smith were defeated.

This early agitator in behalf of medical education in Virginia was born in Westmoreland County, Virginia, August 29, 1782. He was the second son of the Reverend Thomas Smith of Cople Parish and Mary Smith, daughter of John Smith of Shooters Hill, who was a member of the House of Burgesses and second cousin of George Washington. John Augustine Smith graduated from William and Mary in 1800, studied medicine in Europe, graduated from St. Thomas's Hospital, London, returned to Virginia, and set up to practise in Gloucester County. Shortly afterwards he moved to New York City, where as adjunct lecturer on anatomy in 1807 he became a member of the first faculty of the College of Physicians and Surgeons. Becoming increasingly more prominent in the College, he was serving as professor of anatomy, surgery, and physiology when called to the presidency of William and Mary College in Virginia in 1814. He resigned this office in 1826 after his plans to move the College had failed. He had not been a popular president. He was accused of injuring the College by abolishing the honor system and instituting a plan of discipline too harsh for Virginia youths. It was alleged that he was a deist and that he was fonder of hunting than of teaching. He returned to New York to his old professorship and in 1831 succeeded John Watts as president of the College of Physicians and Surgeons. From that time until he retired to private life in 1843 he was

[21] Adams: The College of William and Mary, pp. 59-61.
[22] Adams: The College of William and Mary, pp. 59-61.

the center of medical teaching in New York. Under him the College was moved to 67 Crosby Street, the curriculum was broadened, and many new features introduced. In his latter years a quarrel with one of his fellow teachers led to the appearance of a denunciatory pamphlet entitled *Exposition of the Conduct and Character of Dr. Smith.*

His published works included *A Discourse on the Manner in which Peculiarities in the Anatomical Structure affect the Moral Character,* 1817; *Select Discourses on the Functions of the Nervous System,* 1840; *The Mutations of the Earth; Moral and Physical Science;* and *Smith's Prelections.* In 1828-'29 he was coeditor of the *New York Medical and Physical Journal.* He was vice-president of the New York Lyceum of Natural History in 1841.

Seventeen years after Dr. Smith's effort the teaching of medicine was again attempted at William and Mary, this time centering about the versatile Dr. John Millington. The College catalogue of 1841-'42 stated that "As nearly all the Medical Colleges of the union require that a student shall have studied medicine with some practitioner for two years before he offers himself for their instruction and for graduation, Professor Millington undertakes a class in this department of science. . . ." Referring to this innovation in Virginia, Robley Dunglison wrote in the medical journal[23] of which he was then editor: "We find by the Annual Catalogue of this old and respectable institution [William and Mary College], that Professor Millington undertakes a class for medical instruction, for which he possesses ample means of illustration. The subjects taught in the first session, are anatomy, physiology, materia medica, and pharmacy. In the second session, anatomy of the nerves and organs of sense, pathology and therapeutics, operations of surgery, materia medica and pharmacy continued and concluded. The textbooks are the same as those used in the principal medical colleges." The fee for the session was $30.00. Dr. Millington was agent for Dr. Auzoux's anatomical models, which were kept in his office for the use of his pupils.[24]

Dr. Millington had come to Williamsburg from Philadelphia in 1837 to take the chair of chemistry and natural philosophy and had bought the George Wythe house for his home. There he was constantly engaged in experiments in physics, making with his own hands practically all of his apparatus. A faculty quarrel—one of the commonest of the Nineteenth Century academic diversions—in which all but one of the faculty resigned and which closed the College during the session of 1848-'49, terminated his connection with William and Mary.

[23] American Medical Intelligencer, new series, 1841, v. 1, p. 20.
[24] Jordan MS.

John Millington was born in London, May 11, 1779. He was a son of Thomas Charles Millington and his wife, Ruth Hill. He was sent to Oxford but left before receiving a degree and took up the study of law. He was admitted to practice in 1803 but soon gave it up to study medicine, in which he probably graduated from some London institution. Still later he studied engineering, which really became his life's work. He was at one time associated with McAdam, the road builder, and together they installed the first gas lights on the streets of London. He was engineer of the West Middlesex, London, waterworks and superintending engineer of the royal grounds in London.[25]

Along with Sir Humphrey Davy, Faraday, and others he was a lecturer at the Royal Institution from 1817 to 1829. At Guy's Hospital he taught natural philosophy. He was vice-president of the London Mechanics Institution, and became a member of the first faculty of the University of London in 1827.

He left England in 1829 to become superintendent of the newly discovered silver mines in Mexico. As recently as fifty years ago silver Mexican dollars were to be found marked with his initials, J. M. In 1834 he arrived in Philadelphia and three years later joined the faculty of William and Mary College. When he resigned in 1848 he took up a new professorship in the University of Mississippi, at the same time acting as state geologist. In 1854 he transferred to a medical college in Memphis. He moved to Philadelphia during the Civil War and returned to Richmond in 1866 to spend the declining years of his life with his daughter, Mrs. Blankenship, on Third Street. He died in 1868, aged eighty-nine, and is buried in Bruton Parish churchyard. The honors which were bestowed upon him before coming to this country were unusual. In addition to his teaching positions he had been a fellow of the Royal Society (1805), one of the original members of the Royal Astronomical Society (1820), and a fellow of the Linnæan Society (1823). His published works included a book on natural philosophy (1823) and one on civil engineering (1839).[26]

IV. THE WINCHESTER MEDICAL COLLEGE

On December 30, 1825 an act was passed incorporating the College of Physicians of the Valley of Virginia at Winchester.[27] Among those behind the undertaking were the young physicians, John Esten Cooke and Hugh Holmes

[25] The key to Buckingham Palace Gardens, which he carried, is now in the possession of his granddaughter, Miss Georgie Blankenship, of Richmond.

[26] Sketches of Millington's life, in the Dictionary of National Biography; Cyclopedia of Virginia Biography, v. 2, p. 320; William and Mary Quarterly, new series, v. 3, p. 23. Communications from S. G. Gladden, assistant professor of physics, University of Mississippi, and from Dr. Millington's granddaughter, Miss Georgie Blankenship, of Richmond.

[27] Acts of the Virginia Assembly, 1825-'26, p. 83.

McGuire, both of whom attained eminence in their profession. Dr. Cooke assumed the chair of the practice of medicine and obstetrics, Dr. McGuire that of physiology, anatomy, and surgery. Another of the incorporators was Alfred Thruston McGill, to whom was assigned the teaching of chemistry and materia medica. The successful law school of Judge Henry St. George Tucker, father-in-law of Magill, had been organized in Winchester two years before, and this may have suggested a medical school for Winchester. The undertaking was short-lived, and the school closed its doors in 1829.

Dr. Magill (1804-1837) was a native of Winchester and a graduate in medicine from the University of Pennsylvania. After the Winchester school closed he practised four years in Jefferson County and was the author of a prize essay on typhus, which was largely responsible for his appointment, though still a very young man, to succeed Robley Dunglison at the University of Virginia. Here in 1833 he became professor of medicine and therapeutics and soon demonstrated those exceptional teaching qualities that made his early death from pulmonary tuberculosis, four years later, a matter of universal regret.[28] He had two distinguished nephews, Dr. Archibald Magill Fauntleroy of Staunton, and Bishop Alfred Magill Randolph.[29]

The senior professor in the Winchester school, John Esten Cooke, was likewise called to a larger medical college. He was a son of Dr. Stephen Cooke, Revolutionary surgeon from Alexandria, Virginia, and Catherine Esten, an accomplished Englishwoman whom Cooke had met and married when he was a British prisoner in Bermuda. The couple remained in Bermuda until 1791 and then returned to Alexandria. John Esten Cooke was born while his parents were on a visit in Boston in 1783. He was particularly well educated and, after reading medicine under his father, took his medical degree from the University of Pennsylvania in 1805, defending the thesis, "Account of the Inflammatory Bilious Fever Which Prevailed in the Summer and Fall of 1804 in the County of Loudoun, Virginia." He began practice in Warrenton, Fauquier County, but in 1821 moved to Winchester. In 1824 he prepared and published in the *Medical Recorder* a brochure on the autumnal and winter epidemics. Its scholarly style attracted wide attention. Shortly after this he joined McGuire in founding the Winchester school. In 1827 he was called to Transylvania University to succeed Daniel Drake and in 1828 produced a two-volume work on pathology and therapeutics. He was a voluminous writer and became the coeditor of the *Transylvania Journal of Medicine and the Associated Sciences.* His advocacy of

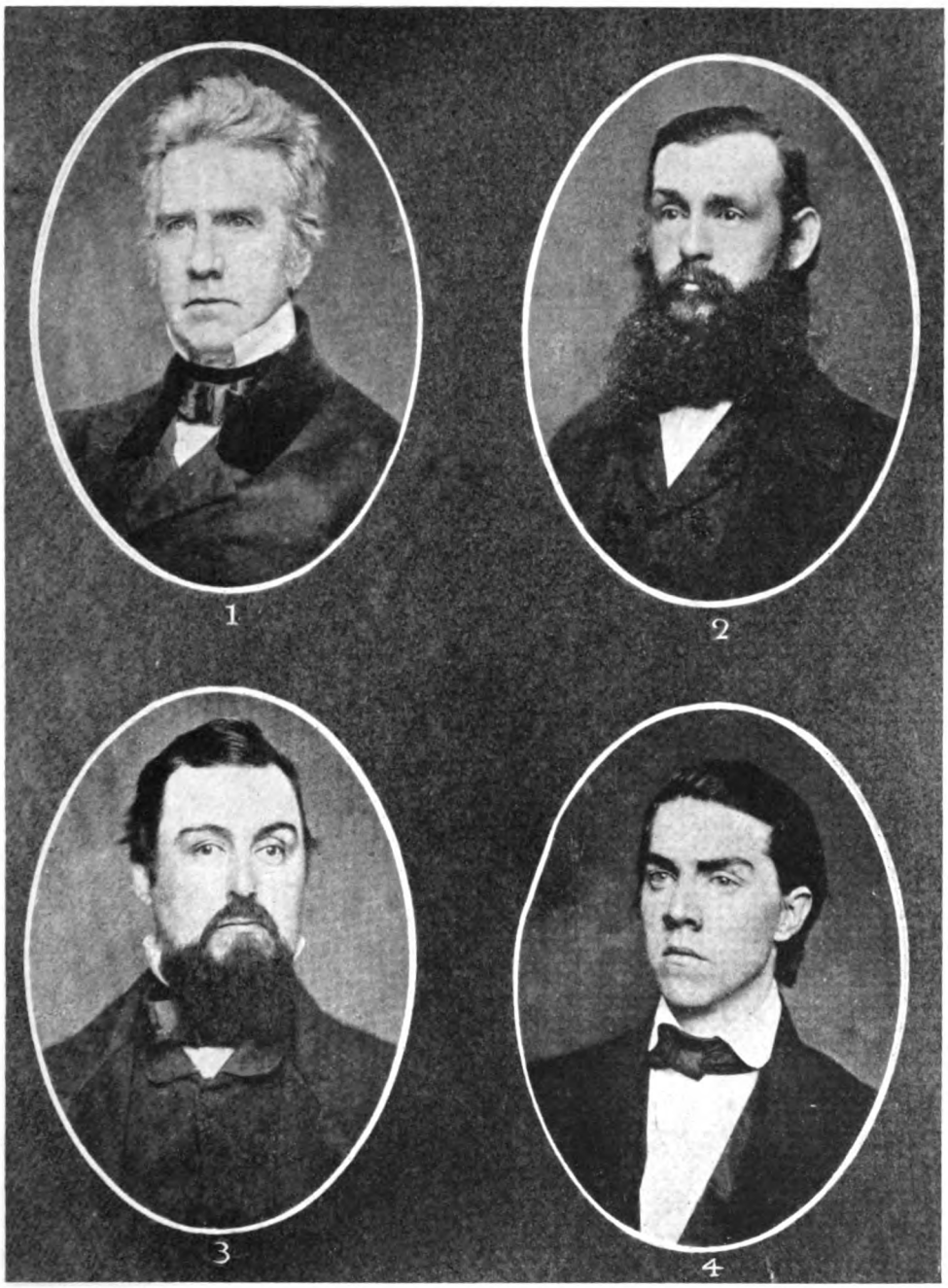
[28] Memorial Sketch of Dr. Magill, by his daughter, in University of Virginia Alumni Bulletin, 1897, v. 4, no. 1, p. 3.
[29] Cartmell: Shenandoah Valley Pioneers, pp. 451-452.

massive doses of calomel (two ounces a day for three days) and his heated defense of a theory which attributed all disease to a common cause showed an opinionated professional attitude not uncommon in his day. About this time he left the Methodist for the Episcopal Church. His enthusiasm for this denomination was such that in 1832 he was elected professor of history and polity of the Church in the Theological Seminary at Lexington. In 1837 he left Lexington and became one of the founders of the Louisville Medical Institute. Here he continued his teaching until 1844. His last days were spent in retirement on the Ohio River. He died October 19, 1853.[80]

After a lapse of eighteen years medical teaching was revived in Winchester in 1847, and under a new charter the Winchester Medical Collge opened its doors. The faculty now consisted of Hugh H. McGuire, professor of surgery; J. Philip Smith, professor of practice of medicine; William Bradford, professor of chemistry and materia medica; J. H. Straith, professor of obstetrics and diseases of women and children; and Daniel Conrad, professor of anatomy and physiology. After a few years Dr. Bradford was succeeded by Dr. Bushrod Taylor, and Dr. Conrad by Dr. J. William Walls. With the exception of the years 1856 to 1858 when the chair of anatomy was held by Hunter McGuire, son of Hugh H. McGuire, the faculty remained unchanged until 1861. The college building, a red brick structure with stone trimmings, contained a surgical amphitheatre with a large glass dome, two lecture halls, a dissecting room, chemical laboratory, museum, and offices, all made possible by a gift of $5,000 in 1847 from the Literary Fund of the state, augmented by generous subscriptions from the citizens of Winchester. In some respects the method of teaching was a departure from that current in medical schools of that day. Instead of a curriculum crowded into four months with many lectures each day, the session of the Winchester school was of eight months' duration, and the lectures were so arranged that there were only two or three a day. In this way time was afforded for dissection, parallel reading, and preparation for the succeeding day. Daily quizzes added to the thoroughness of the teaching, and a good chemical laboratory was maintained. Clinical demonstrations formed a large part of the teaching. There was no dearth of anatomical material, and many specimens were preserved for demonstration purposes. The custom of grave-robbing was of course in vogue, and the professor of anatomy was personally in charge of the students detailed for such nocturnal prowlings.

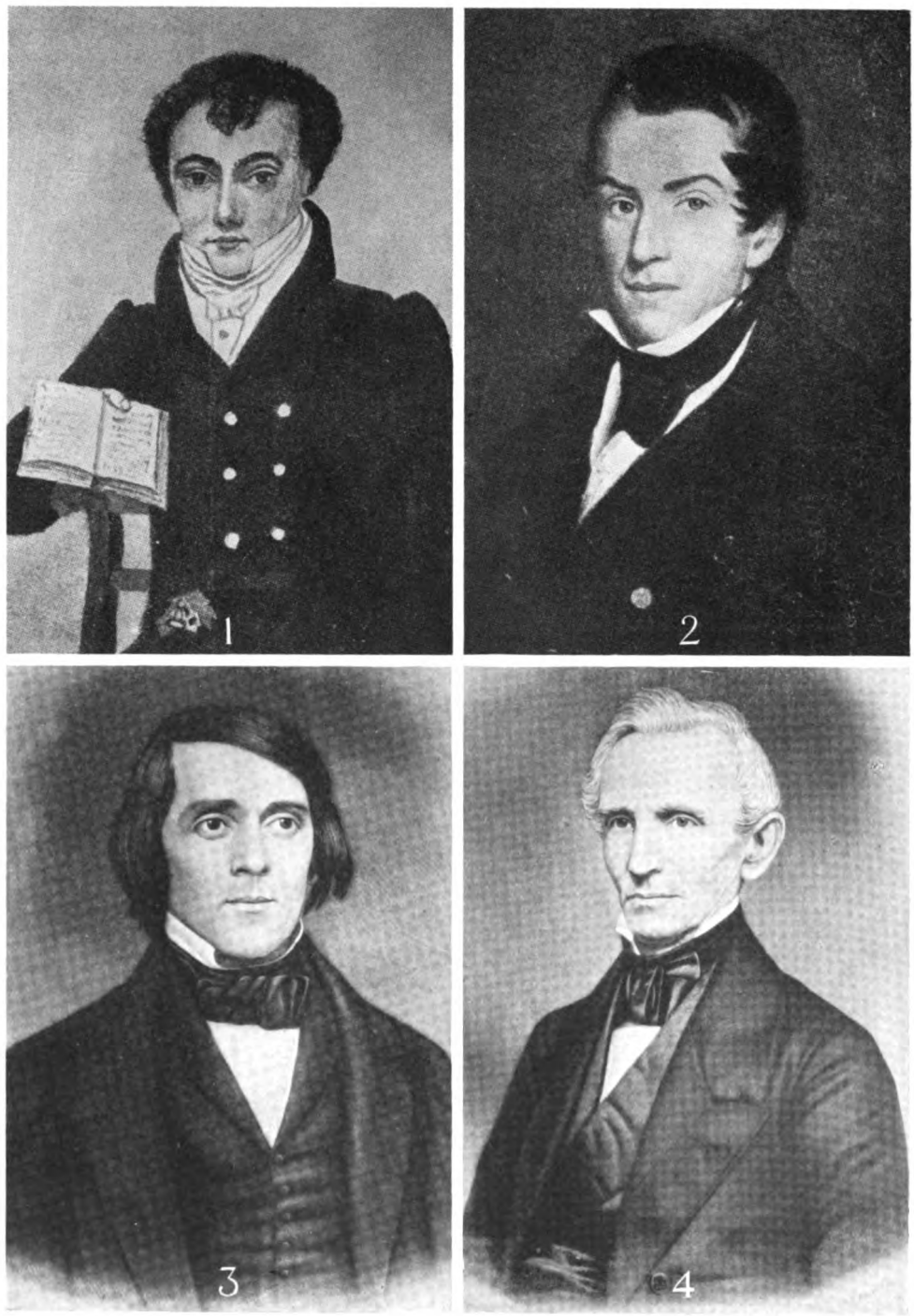
The college ceased to exist shortly after the beginning of the Civil War. When

[80] Kelly and Burrage: American Medical Biographies, p. 247. Southern Literary Messenger, v. 24, p. 286.



FACULTY OF THE WINCHESTER MEDICAL SCHOOL IN 1856

1. Hugh H. McGuire. 2. Bushrod Taylor. 3. J. Philip Smith. 4. Hunter H. McGuire.



EARLY TEACHERS IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF VIRGINIA
1. Robley Dunglison. 2. John Patten Emmet. 3. John Staige Davis. 4. Henry Howard.

the fighting around Winchester made the housing of the sick and wounded a matter of great difficulty, the college building was used as a hospital until General Banks burned it as an act of reprisal in March 1862. For years thirty or forty students had annually attended the sessions of the college. As evidence of the good work done there the catalogue of 1860 stated that no graduate applying for admission to the medical corps of the army or the navy had failed to pass his examination successfully.[81]

V. THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF VIRGINIA

Thomas Jefferson, a layman, planned the medical department of the University of Virginia, and from the beginning the school was organized to teach medicine from the cultural rather than from the practical point of view. The founder did not have in mind so much the turning out of physicians as the broad education of Virginia youths in those sciences now recognized as falling particularly in the domain of medicine. This bias was evident as late as 1889 when the visitors went on record as favoring the subordination of clinical to theoretical instruction, and so much emphasis was placed upon this method that later it became extremely difficult to introduce the necessary practical clinical type of instruction. It became the unwritten law that the theoretical instruction at the University should be unexcelled. For a long time there was opposition to admitting medical students from other colleges to advanced standing, and much emphasis was laid on quizzes and examinations. One happy result of this tendency was the enviable success which the graduates of the school enjoyed when they became candidates for medical service in the army and navy and for hospital and other appointments. It was long maintained at the University that, although the course offered there led to the degree of M. D., it should not be considered as final, and it was customary for graduates of the medical school to take additional degrees in the schools of Philadelphia, Baltimore, and New York. This was in line with the best opinion of many experienced educators, who maintained that clinical instruction should be based on a foundation of theoretical teaching laid out in the broadest and most thoroughgoing fashion. The modern tendency to begin clinical instruction almost before the student has had time to register is not universally approved.

Provision was made for the teaching of medicine at the University from its beginning. The minutes of the visitors, in Thomas Jefferson's own handwriting, April 7, 1824, at a time when there were but seven other chairs in the whole

[81] McGuire: Winchester Medical College.

University, record the creation of a chair of anatomy and medicine. The subjects assigned to this professorship were anatomy, surgery, physiology, pathology, materia medica, pharmacy, and the history of the progress and theories of medicine. The time alloted for such a staggering variety of subjects was two hours on Tuesdays, Thursdays, and Saturdays.[32]

Thomas Jefferson's efforts to secure a professor of medicine in this country were unsuccessful. The appointment of Dr. Thomas Cooper, of Pennsylvania, a Unitarian, had raised an outcry, and rather than "fill the chairs with . . . secondary characters" he turned to England for one possessed of the "due degree of science, talent for instruction, and correct habits and morals." As was to be expected, the medical press was quick to resent the slight to American medicine and did not hesitate to call Mr. Jefferson to task when his choice fell upon Robley Dunglison (1798-1869), a young Englishman of twenty-six, who had already written *Commentaries on Diseases of the Stomach and Bowels of Children* and was editing the *London Medical Repository.* A memorable three-months' voyage, in which he and his bride and several other professors crossed the stormy Atlantic from Liverpool, brought him to Richmond, where refreshment and entertainment preceded his journey to Charlottesville. At an annual salary of $1,000 Dunglison served the University for eight years.[33] In addition to his other duties he acted first as secretary and later as chairman of the faculty. During this period he set the medical department well on its feet. Besides teaching the numerous subjects that were assigned him he found time to carry on a considerable volume of medical writing. Before he left the University he had written an *Introduction to the Study of Grecian and Roman Geography,* in association with George Long of the University, 1829; *Human Physiology,* 1832, dedicated to James Madison, rector of the University; and his famous *New Dictionary of Medical Science and Literature,* 1833, a work of great erudition, of which 55,000 copies were sold during his lifetime and which reached, in 1897, its twenty-third edition. Dunglison left the University in 1833 for a professorship in the University of Maryland but soon transferred to Jefferson Medical College, Philadelphia, where years of successful teaching and writing awaited him.[34]

When Dunglison came to the University, permission was granted to the medical faculty to practise in consultation anywhere they might be called; but

[32] Davis: History of the Medical Department of the University of Virginia, p. 1.

[33] Professors' salaries were augmented by houses of residence and by student fees, guaranteed by the University to the amount of $1,500 a year. Bruce: History of the University of Virginia, v. 1, p. 357.

[34] Trent: English Culture in Virginia. Kelly and Burrage: Dictionary of American Medical Biography, p. 357.

beyond this, private practice was not allowed. The first session opened with twenty students. There was a six-weeks' vacation in the summer and two weeks at Christmas. In spite of the theoretical nature of the teaching, dissection was provided for from the first, and in 1826 a dispensary was established. After his lectures in the anatomical "theatre" the professor of medicine was expected to linger for half an hour to dispense free medical service to the indigent. To those who could pay, fifty cents was the fee. Out of moneys thus accumulated additional supplies of "medicines and salves" were purchased. In 1828 the University graduated its first class in medicine. All told, there were only three graduates, among them Gessner Harrison, who later made a name for himself in classical philology. In 1830 there were thirty-two students in the department, with eight graduates.[35] This year the University of Pennsylvania recognized graduates of the school for advanced standing. Two years later considerable improvement was noted: manikins were introduced in obstetrics, and the first appropriation was made for anatomical material. During this year the first catalogue descriptive of the work of the department appeared. In it emphasis was laid upon an extensive museum, on quizzing as a feature, and on the ten-months' course in contrast to four months in the general run of medical schools. By 1833 the University's reputation for high standards of medical teaching had begun to be generally recognized. "I was told some time ago by a medical student of Philadelphia," wrote Robert Conrad to Dr. Magill, "that the medical school of your University stood there in high estimation, and that the students of one year from the University school almost invariably graduated in Philadelphia the second year at the head of their classes."[36]

Before Dunglison's departure from the University in 1833 two other professors had been added to the department of medicine. As early as 1827 John Patten Emmet (1796-1842), who had taught chemistry, botany, and zoölogy from the beginning, joined the medical faculty as professor of chemistry, materia medica, and pharmacy. He was born in Dublin, April 8, 1796, of a distinguished Irish family. When a child he was brought by his parents to New York, where he was educated. He later entered the Military Academy at West Point, but ill health prevented his graduation and directed his interests toward medicine. In 1822 he graduated from the College of Physicians and Surgeons in New York and first began practice in Charleston, South Carolina, where his success as a lecturer on chemistry won him, in 1825, the offer of the chair of natural history in the University of Virginia. From that time until his death in

[35] A sketch of the History of the University of Virginia, together with a Catalogue of the Professors and Instructors, Graduates, etc., 1880, p. 39.
[36] University of Virginia Alumni Bulletin, 1897, v. 4, p. 79.

1842 he was a unique figure in the community. Exercising his ingenuity in the field of horticulture, experimenting with flowers and fruits, he was chiefly responsible for the famed stock of apples and peaches that now prevails in the neighborhood of Charlottesville. His interest extended to the cultivation of grapes, the manufacture of wine, the raising of silkworms, and the development of a particular kind of kaolin adapted to the manufacture of pottery and porcelain vessels. His wife was Mary Byrd Tucker, niece of Henry St. George Tucker, a colleague on the faculty. His son, Thomas Addis Emmet, achieved lasting reputation as a gynecologist.[87]

The remaining member of the medical faculty during Dunglison's incumbency was Dr. Thomas Johnson, who became demonstrator of anatomy in 1827, was advanced to a full professorship of anatomy and surgery in 1832, and resigned in 1834, apparently because the visitors refused to raise his salary. He moved to Richmond to become prominently identified with the profession of that city as well as with the founding of the Medical College of Virginia.[88]

Alfred T. Magill, a former professor in the Winchester Medical School, succeeded Dunglison as professor of medicine and therapeutics in 1833; and Augustus L. Warner, a young Baltimore physician of promise, followed Johnson. Neither was at the University very long, Magill dying and Warner resigning in 1837. They had both put their fingers upon the weak spot in the department—lack of clinical advantages—and Magill, warmly seconded by Warner, proposed to the board of visitors in 1834 that the medical department be moved to Richmond. Thomas Jefferson, himself, realizing this deficiency, had once seriously entertained the idea of moving the department to Norfolk. In 1837 Warner again agitated the question, at the same time proposing that the school be divided into four courses so that each professor would have fewer subjects to teach. Emmet opposed the suggestion, and the change was not made.

In subsequent years this question of moving the medical department to Richmond and amalgamating it with the Medical College of Virginia was the occasion of a bitter and recurring controversy. In 1854 James B. McCaw of Richmond wrote that so far as it went, the University medical school was admirable, its method of teaching thorough, and its course long. "It is . . . a very useful and valuable grammar school in medicine, where the student is well grounded in the rudiments and theory of his profession." But its inland position made it unable to give hospital advantages, and it must therefore be considered a preparatory school. "In truth, the distinguished founder of the

[87] Barringer: University of Virginia, v. 1, p. 345. Bruce: History of the University of Virginia, v. 2, pp. 15-18.
[88] Bruce: History of the University of Virginia, v. 2, pp. 110-111.

University never intended to give to the medical branch of that institution the right of granting the degree of M. D.; but only designed that there should be given to the candidate for A. M. . . . some general and adequate idea of his own complex system. . . . The idea was an admirable one. . . ."[39] McCaw believed that anatomy and physiology should be taught at all colleges.

An editorial in the *Virginia Medical Journal* in 1857 proposed that "the medical department of the University of Virginia, with its long term of nine months, its careful system of teaching by lectures and recitations, and its well-deserved reputation, should be transferred to Richmond, and by a union with the Medical College of Virginia and an incorporation of the two faculties, should offer to the student a course of instruction" superior to that given in either institution alone.[40]

In 1867 a bill was presented to the legislature to effect the amalgamation of the two schools. It was proposed that two professors should be left in Charlottesville to lecture on chemistry, medical jurisprudence, and hygiene, and that the college in Richmond, to be known as the Medical Department of the University of Virginia, should consist of nine professors, giving a course of at least six months' duration. It was believed that this plan would keep no less than two hundred students at home who were then patronizing Northern colleges. "The medical department of the University of Virginia is simply a preparatory school," wrote an advocate of the plan, "avowedly so by the statements of her own Professors—and the students are obliged to go elsewhere . . . 'to finish off'."[41] The reply of the medical faculty at Charlottesville was that the two Virginia schools could command a larger patronage than either could command alone; that the medical department at the University of Virginia was a source of revenue rather than a drain upon the state; that the annual cost to the state of the department transferred to Richmond and enlarged by the incorporation of seven additional chairs would be for salaries alone no less than $10,000; that the medical department of the University already had the approbation of the American Medical Association; and that nothing was to be gained from a combination of the theoretical and practical instruction, for the two parts had to be taken up successively.[42]

The arguments of ten years earlier were advanced. "The medical department of the university might be transferred to Richmond," contended an advocate of

[39] Virginia Medical and Surgical Journal, 1853-'54, v. 2, p. 48.
[40] Virginia Medical Journal, 1857, v. 9, p. 248. Under this plan a nine-months' course, with nine professors, was advocated.
[41] Editorial, Richmond Medical Journal, 1867, v. 3, p. 392.
[42] Richmond Medical Journal, 1867, v. 3, p. 487.

amalgamation, "and a coalition between the two schools thus produced. Let the long term of the university school . . . be adopted. Make a faculty, numbering at least eight professors; appropriate money enough to purchase a museum, to enlarge the present college buildings, and to give to the institution every advantage. Let the governing power open the doors of the college wide, and . . . fill its chairs with those who are worthy. . . . Let them yearly appoint a board of medical examiners, to be present at the examinations of students for their degrees, and . . . to issue to them their license to practice physic."[43]

The state journals carried able defences of the thesis prepared by representatives of the University faculty, urging that the medical department stay at Charlottesville. The good work of the medical department of the University was in fact not the least persuasive part of the faculty's eloquent appeal to the legislature in the session of 1845-'46 when the state threatened to withdraw all support from the University. "We prefer that it should remain as it is at present, and be held by the profession as the great preparatory school of the South," wrote a member of the faculty in 1857.[44] It was pointed out that the medical faculty was composed of full-time professors, living on the grounds of the University and always accessible; that the course was twice as long as that of any other school of the time, permitting of some sort of grading, which was impossible in those schools which gave two identical courses of four months each. Finally, it was pointed out that the diligence of the professors made tutors unnecessary, that there were no distracting clinics, and that the quiet academic atmosphere of the University promoted studiousness. The future was to see this question agitated before the legislature time and again, with the opponents of amalgamation always strong enough to defeat it.

The resignation of Dr. Warner in 1837 brought to the chair of anatomy and surgery a young man who was to win great distinction. James Lawrence Cabell (1813-1889), first president and organizer of the National Board of Health and author of a work which is said to have advanced the idea of evolution before Darwin's *Origin of Species,* was for over fifty years professor of surgery at the University of Virginia. Never before or since has so gifted a man held a medical chair in the University.

He was born in Nelson County, August 26, 1813. Both George Cabell, his father, and William Cabell, his grandfather, were physicians. The private schools of Richmond and the University of Virginia gave him his education. In medicine he graduated from the University of Maryland in 1834. Rounding out his training by study in Paris, he was recalled to the University of Virginia

[43] J. B. McCaw, in the Virginia Medical and Surgical Journal, 1853-'54, v. 2, p. 48.
[44] Virginia Medical Journal, 1857, v. 9, p. 507.

in 1837 to become professor of anatomy, physiology, and surgery. In 1849 the course was rearranged, and from that time until his resignation in 1889, Cabell taught comparative anatomy, physiology, and surgery. During the Civil War he was in charge of the Confederate hospitals in Charlottesville. He was an organizer and a president of the Medical Society of Virginia and took a prominent part in the establishment of the Virginia State Board of Health, of which he was also president. For a year he was head of the American Public Health Association (1879), and was active in the Association's work for the creation of a National Board of Health. In 1873 Hampden-Sidney College conferred upon him the honorary degree of LL. D. Full of honors, this august old man died in Charlottesville August 13, 1889, and was buried at the University, whose prominent position was said at the time to be "greatly due to his wise councils and his indomitable energy."[45]

He "had the courage of a lion tempered with the tenderness of a woman," wrote one of his colleagues. His position in the medical annals of Virginia was assured. He had ably taught the theory of surgery and, fully abreast of the advances in his field, was among the first in this country to advocate Lister's new methods. Most of all his contribution was in the field of public health, where he was in every sense a pioneer.[46]

The death of Dr. Magill brought to the chair of medicine Dr. Robert Eglesfeld Griffith (1798-1850). Ill health forbade his remaining long in Charlottesville, and he resigned in 1839. He was a Philadelphian, a graduate of the University of Pennsylvania, and had previously taught in the Philadelphia College of Pharmacy and the University of Maryland. He was the author of numerous works on chemistry, botany, and therapeutics, but his chief interest lay in the field of botany and conchology.[47]

At this time there had been no increase in the number of the faculty, Emmet, Cabell, and Griffith constituting the whole force in 1838. It was during these years that the catalogue, in addition to fully describing the course offered, laid down what was at that time an unheard-of prerequisite to medical education—an adequate preliminary understanding of the English language. It was "the first intimation of any entrance requirements in medical education anywhere."[48] At the same time Professor Cabell announced that surgical operations would be performed upon the cadaver *a capite ad calcem,* an early adaptation of a prac-

[45] Virginia Medical Monthly, 1889, v. 16, p. 492.
[46] Addresses Commemorative of James L. Cabell, delivered at the University of Virginia, July 1, 1890.
[47] Kelly and Burrage: Dictionary of American Medical Biography, p. 500.
[48] Davis: History of the Medical Department of the University of Virginia, p. 6.

tical method of teaching surgery, later to be followed in practically every medical school.

In 1839 Henry Howard (1792-1874) became professor of medicine, therapeutics, and obstetrics. A native of Frederick County, Maryland, a graduate in medicine from the University of Pennsylvania, he had already had twenty-four years of practice in Montgomery County, Maryland, as well as a professorship in the University of Maryland, before joining the Virginia faculty. His long service of twenty-eight years was terminated in 1867, when he became president of the Bank of Charlottesville. He died in 1874.[49]

A year after Howard entered the faculty (1840) the catalogue of the department contained an annonuncement of a policy which long governed the giving of the M. D. degree and distinguished the University of Virginia among all American universities. It was stated that in the future neither the length of time nor the number of courses taken in the University would have any bearing upon a candidate's qualifications for the M. D. degree, but that a comprehensive examination would be the sole criterion of his fitness for this honor.

In 1845 Robert Empie Rogers (1813-1884) was made professor of chemistry and materia medica, having served as an instructor in this department since 1841. He held the position until 1852. Dr. Rogers was a native of Baltimore, studied at William and Mary College, where his father, Patrick Kerr Rogers, was professor of natural history, took his medical degree at the University of Pennsylvania in 1836, and almost immediately went into chemistry as a profession. While at the University of Virginia he wrote a well-known textbook on the subject and greatly enlarged the scope of chemical teaching. In conjunction with his brothers, James and William, he carried on a number of chemical investigations and published a number of articles of merit in scientific journals. He left the University of Virginia in order to accept the professorship of chemistry in the University of Pennsylvania, succeeding his brother James. In 1877 he transferred to a similar chair in Jefferson Medical College, and died in 1884.

In 1845 the expenses of the medical course—including tuition, books, board, and lodging—were said not to exceed $228 a year. There was a curious regulation of the faculty by which each student was required to deposit with "the Proctor and Patron" his entire fortune, which that dignitary later dispensed as he saw fit. "It was a high crime to be caught with any unauthorized coin upon the person."

In 1845 John Staige Davis (1824-1885) was made demonstrator of practical

[49] Bruce: History of the University of Virginia, v. 2, p. 175.

anatomy.[50] He was long an outstanding figure in the faculty, and it was largely through his efforts that anatomical teaching was put upon a high plane. Realizing the disadvantages of artificial light he required students to do all their dissection by daylight. He also instituted those practical examinations on anatomy which have since been associated with his name and to which is attributed the thorough anatomical knowledge his students are said to have displayed. Dr. Davis, who was born in Albemarle County, Virginia, was the son of John A. G. Davis, professor of law at the University of Virginia. Raised in this atmosphere of learning he took his M. A. degree from the University before he was sixteen years of age, graduated in medicine a year later (1841), and went to Philadelphia for practical instruction. He set up for practice in Jefferson County in 1843 and continued there until he entered the University faculty in 1845. In 1856 he was made full professor of anatomy, materia medica, and botany. Before his death on July 17, 1885 he became one of America's foremost teachers of anatomy.[51] His son, John Staige Davis, likewise studied medicine, and in 1893 became the first demonstrator in pathology at the University. He later became professor of medicine, ornamenting the chair by medical gifts of the highest order until his retirement a few years ago.

John Lawrence Smith (1818-1883), renowned as an engineer, mineralogist, and chemist, succeeded Dr. Rogers in 1852 as professor of chemistry and materia medica. He was in the faculty only a year, but during this time was successful in instituting practical laboratory courses. A native of Charleston, South Carolina, he was a student at the University of Virginia before returning to the Charleston Medical College for his medical degree. He practised little medicine, however, for he was soon diverted into other fields—analyzing the marls on which the city of Charleston stands, investigating the relation of soils and climate to the cultivation of cotton, and serving a long time in Turkey as a mining engineer to that government. He left the University of Virginia to accept a chair in the University of Louisville. In 1850 he invented the inverted microscope.

Socrates Maupin, who succeeded him in 1853, was already well known in Virginia, having for a number of years successfully taught in the Medical College in Richmond. His career at the University was remarkable for the fact that he held the position of chairman of the faculty from 1854 to 1870, longer than anyone else before or since. "It was due largely to him," according to his

[50] Catalogue of the Professors and Instructors, Graduates, etc., since the Foundation of the Institution, 1880 p. 18.
[51] University of Virginia Alumni Bulletin, 1894, v. 1, no. 3.

colleagues on the faculty, "that the prostration during the war was not a final and remediless blow" to the University.[52] During his régime materia medica was switched from the department of chemistry to that of anatomy.

In 1856 the faculty consisted of: Henry Howard, professor of medicine, obstetrics, and medical jurisprudence; James L. Cabell, professor of comparative anatomy, physiology and surgery; Socrates Maupin, professor of chemistry and pharmacy; John Staige Davis, professor of anatomy, materia medica, and botany; and B. W. Allen, demonstrator of anatomy.

In 1857 an appropriation of $7,500 was made for the construction of an infirmary, and in the same year Henry Scharf was employed to execute a series of colored plates for the schools of physiology and anatomy. Six years were required for the commission, and the collection was considered the finest in the United States. The fire which burned the Anatomical Hall in 1886 destroyed them all.[53] It was perhaps a fortunate loss, because the day had arrived when the cadaver and the experimental animal made drawings of this type a hindrance rather than a help to learning.

During the Civil War three members of the medical department entered the service of the Confederate States. Drs. Cabell, Davis, and Allen were commissioned surgeons in the medical corps of the army but were required to hand over to the University authorities any remuneration they received while in the military service. Although no catalogues were issued during this period, medical instruction was not discontinued at any time during the Civil War. After the war the same desolation, poverty, and hard times descended upon the University community which befell other parts of the South, but the faculty continued to serve, at times virtually without pay.

The first post-bellum change occurred in 1865 when J. E. Chancellor succeeded Allen as demonstrator of anatomy. In 1867 James F. Harrison took Dr. Howard's place in the chair of medicine and obstetrics, remaining in that position until 1886. In 1868 and 1869 the University graduated three exceptional young men, each of whom later achieved an enviable reputation—William B. Towles, William C. Dabney, and Walter Reed.

In 1870 John William Mallet, who had identified himself with the University two years before, offered optional courses on poisons and clinical diagnosis. For forty-four years he was a familiar figure—"a prodigious, prolific and painstaking worker, precise, methodical, industrious and punctual in all affairs. His erect form and commanding personality, as he raised his head and walked

[52] Bruce: History of the University of Virginia, v. 3, p. 95.
[53] Barringer: University of Virginia, v. 1, p. 160.

among us, unafraid of anything or anybody in this world, is a sweet and abiding memory."[54]

In 1875 the public health interests of Professor Cabell were reflected in the creation of a Board of Health for the University, to which the whole faculty was formally appointed. A few years later the visitors narrowed the Board's functions to a small committee known as the "committee on health, sewage, drainage and water supply," and the inspection of boarding houses, dairies, and the like was assigned to it. In 1880 the faculty made an appeal to the board of visitors to extend the medical course to two years. This was done, but the action was revoked two years later.

In 1886 Professor Francis Perry Dunnington offered an elective course on pharmacy. The same year a dispensary was opened in the Anatomical Hall, and in 1888 another was established in the town of Charlottesville.[55]

The year 1886 was also notable for the coming to the faculty of a man of great promise, William Cecil Dabney, as professor of medicine. Dr. Dabney (1849-1894) in the short period of eight years accomplished more than any of his predecessors, and for the first time put the teaching of medicine at the University upon a modern basis. He was an indefatigable worker, fully appreciated the importance of independent thought and investigation, and at the same time was "the kind, skillful, beloved physician, always with the illest patient however so humble."[56] He was a prolific writer, contributing widely to contemporary medical literature. His translations from German and French journals appeared year after year as an attractive feature of the *Virginia Medical Monthly*. In 1873 he won the Boylston Prize with an essay on "The Value of Chemistry to the Medical Practitioner." He was a contributor to Keating's *Cyclopedia of the Diseases of Children*, and syllabi of his lectures on medicine, obstetrics, and medical jurisprudence were issued for his students. Dr. Dabney was born July 4, 1849 in Albemarle County, graduated in medicine at the University in 1868, and after a year as resident physician in Baltimore and a year's practice in Roanoke, set up in Charlottesville for practice. Here he continued until called to the University's professorship. In 1869 he married Jane Belle Minor, and to them nine children were born. A son, William M. Dabney, studied medicine. Dr. Dabney died of typhoid fever, August 20, 1894.[57]

Another notable member of the faculty during this period was William

[54] Davis: History of the Medical Department of the University of Virginia, p. 21.
[55] Bruce: History of the University of Virginia, v. 4, pp. 8-10.
[56] Davis: History of the Medical Department of the University of Virginia, p. 21.
[57] Bruce: History of the University of Virginia, v. 4, pp. 39-40. Barringer: University of Virginia, v. 1, p. 178.

Beverley Towles (1847-1893), a native of Fluvanna County, Virginia, and the son of Dr. W. B. and Harriet Johnson Towles. He was born March 2, 1847, served as a lad of seventeen in a Virginia regiment of the Confederate army, and took his M. D. degree from the University of Virginia in 1867 after only one year's study, a feat considered even in that day remarkable. For five years he practised medicine in Carroll County, Missouri, returning to the University as demonstrator of anatomy in 1872. He was made acting professor in 1885 and full professor in 1886. His reputation as an anatomist was not confined to Virginia, and in his later years he also held the chair of anatomy in Vermont, going there every spring to give his course. Towles' *Notes on Anatomy,* his *Syllabus of Notes on Pathology,* as well as his *Syllabus of Notes on Materia Medica,* were pleasing contributions to his students. In 1880 he married Mary E. Thompson, and they had three children. Death came to him suddenly while he was still relatively a young man, a gastric hemorrhage terminating his career, September 15, 1893.[58]

Before the turn of the century several important changes in the faculty occurred. Richard H. Whitehead, who later became dean and the respected professor of anatomy, in 1887 succeeded Douglas Tardy as demonstrator. In 1889 Whitehead transferred to the University of North Carolina and was succeeded by William Gay Christian. Christian succeeded Towles as full professor in 1893. In after years he moved to Richmond and taught anatomy there. Halsted S. Hedges became demonstrator in 1893, Arlie C. Jones in 1897, James B. Bullet in 1899. Albert Henry Tuttle, as professor of histology and bacteriology in 1892, "inaugurated the first real laboratory courses with the microscope,"[59] although Whitehead had made a beginning during his term as demonstrator of anatomy. Augustus Harper Buckmaster succeeded Dr. Dabney in the chair of medicine in 1894. Paul B. Barringer, who had followed Cabell as professor of surgery and physiology in 1889, became professor of physiology and materia medica in 1892, surgery being transferred to the chair of anatomy. He was largely responsible for the hospital which opened in 1901, and became chairman of the faculty in 1896.[60] A fifth chair, that of pathology and hygiene, was created in 1894, and John Staige Davis, Jr., received the appointment.

The progress in medical teaching made at the University in the last decade of the century was greater than all that had been made up to that time. Clinical teaching rapidly assumed the prominence it had long been denied. In 1888 the Cottage Hospital and Dispensary in Charlottesville were opened. Here Edward

[58] Kelly and Burrage: Dictionary of American Medical Biography, p. 1221.
[59] Davis: History of the Medical Department of the University of Virginia, p. 12.
[60] Barringer: University of Virginia, v. 1, p. 182.

May Magruder and Hugh Thomas Nelson, clinical instructors in medicine and surgery, gave bedside instruction to the students in sections, and demonstrations were held twice a week. In 1893 a new dispensary was opened, with resident students and a registered pharmacist, and three years later the usefulness of the dispensary was vastly increased when provision was made for six weekly clinics to be held there under the instructors. About the same time the Annex, established by Dr. Buckmaster across the street, offered students an opportunity to observe the after-treatment of surgical patients; but it was not until 1901 that the nucleus of the present University Hospital, in the form of the Central Pavilion, was opened, with its two-year training school for nurses and vastly improved clinical facilities.

Most notable of all was the rapid extension of the course. Another attempt to secure the two-year course was made in 1890, and in 1892 that plan was formally adopted. Thereafter the first year was devoted to chemistry, anatomy, medical jurisprudence, histology, bacteriology, and physiology; the second year to the practice of medicine, surgery, obstetrics, hygiene, materia medica, gynecology, and practical pathology. In spite of the great fire of that year the school was prepared for another extension of the course in 1895, when the time required for the M. D. degree was lengthened to three sessions. This was accomplished by putting physiology in the second year and transferring surgery, medicine, gynecology, hygiene, and medical jurisprudence to the third. In 1899 the four-year course was instituted on the general lines now obtaining. Altogether this was remarkable progress, the course having been lengthened from one to four years in a period of seven years.

The usefulness of the medical department of the University is exemplified in its graduates. Six hundred and sixteen diplomas were granted among three thousand matriculates from 1827 to 1880.[61] Sixty graduates had entered the medical corps of the army by 1880, and in 1914 the number had reached 168. Two hundred and eighty-six graduates were in the medical department of the Confederate service.[62]

VI. THE MEDICAL DEPARTMENT OF RANDOLPH-MACON COLLEGE

When John Peter Mettauer returned to Prince Edward County from Norfolk after the War of 1812, his reputation drew to him a large following of young men desirous of reading medicine. His popularity as a teacher grew until his departure in 1835 to become professor of surgery in Washington Medical College

[61] Adams: Thomas Jefferson and the University of Virginia, p. 170.
[62] Davis: History of the Medical Department of the University of Virginia, p. 17.

in Baltimore. After only one term he returned to his native county and in 1837 organized the Prince Edward Medical Institute at Worsham for the pupils who again flocked about him. At that time there were only twelve medical schools in this country, in the South only three. He was at first the sole professor in his institute. In addition to caring for an enormous country practice he taught single-handed the subjects of medicine, surgery, clinical medicine and clinical surgery, obstetrics, and pathology. Later one of his sons became his associate. For ten years the institute continued to thrive and to attract students. By 1847 its growth merited the support of a regularly chartered educational institution. Hampden-Sidney College was just a mile away. This was Mettauer's Alma Mater, and to her he would naturally have turned, but in 1838, while his school was still in its infancy, Hampden-Sidney had taken under its wing a medical school in Richmond. He must, therefore, turn to the next most logical institution, Randolph-Macon, situated at that time fifty miles away at Boydton. Overtures were made to the trustees of that institution, and to Mettauer's proposal they gave the following answer on March 31, 1847: "We, the undersigned, to whom was referred a communication from the Professor of the Prince Edward Medical Institute, recommend the connection proposed between that Institution and Randolph-Macon College, with some slight modifications. . . ."[63]

The first faculty of the new medical department consisted of John Peter Mettauer, A. M., M. D., LL. D., professor of the principles and practice of medicine and surgery, and of clinical medicine; his son, Francis J. Mettauer, A. M.., M. D., professor of anatomy, physiology, and chemistry; and another son, Henry Archer Mettauer, M. D., professor of therapeutics, materia medica, midwifery, and medical jurisprudence.

On June 13, 1848 the trustees of Randolph-Macon College forwarded a resolution of thanks to the trustees of Hampden-Sidney for allowing "professor Mettauer of their institution to act at the same time as professor in a medical department of Randolph-Macon College located in the neighborhood of Hampden-Sidney."[64] This was Francis Joseph Mettauer, who, according to the General Catalogue of Students of Hampden-Sidney, was professor of physical science there from 1846 to 1848.

The prospectus of the medical department for the session 1851-1852, announced as the fourth session of the school, is preserved in the library of Randolph-Macon College. In it the trustees assure the prospective student that "the school is situated in a healthy and pleasant country village, abounding in

[63] Minutes of the Board of Trustees, Randolph-Macon College, pp. 375, 382.
[64] Minutes of the Board of Trustees, Randolph-Macon College, pp. 375, 382.

literary institutions, refined and highly cultivated society." Today a visit to Worsham, the site of the college, fails to suggest these unusual advantages. It is no longer the county seat, and no literary institutions remain. Even the foundations of the college building, described as "a handsome and chaste edifice, conveniently arranged with ample lecture and dissecting rooms," defy identification. On June 8, 1854 the Randolph-Macon Board favored a scheme which originated with Dr. Mettauer but was never carried into effect, voting that: "On the application of Dr. Mettauer permission is granted him to remove the medical department of the College to any place in Virginia as he may think advisable," provided there should be no pecuniary obligation upon Randolph-Macon.[65] Petersburg and Norfolk were the localities considered, but the institute remained at Worsham until closed by the Civil War.

The annual enrollment ranged from thirty to thirty-five students, attracted chiefly from Virginia. Of the many students who attended the school, unfortunately the names of only a few have survived. Philip S. Blanton was a student of Dr. Mettauer's in 1849, at the same time teaching mathematics at Hampden-Sidney. He afterwards matriculated at Jefferson College in Philadelphia, graduated a year later and subsequently settled in Cumberland County. Oscar Wiley, of Salem, graduated from Dr. Mettauer's school in 1851. His diploma is still in the possession of his son, Dr. R. M. Wiley. In 1852 he, also, repaired to Jefferson College. Other students of Mettauer's were John Hobson Nelson, who afterwards lived at Villa Rosa plantation, Bayou La Fourché, Louisiana; the three Dillon brothers—John, James, and Alexander—who practised in Prince Edward;[66] Dr. Mettauer's own sons, Francis Joseph, Henry Archer, and Edward Mumford; Clem Fontaine; a Dr. Johns, of Lunenburg, and a Dr. Gregory.[67]

These students were kept busy with the regular routine of academic duties and were used besides as nurses and assistants and in constructing many necessary instruments under the direction of Dr. Mettauer, who had a rare gift for such things. The course was a long one for that day—ten months. The fee was $115. Graduation demanded a thesis and an additional $30. Board was to be had in the neighborhood for from $10 to $12 a month. The Farmville and village stores sold textbooks. Anatomical material was not lacking, for hard by was the old colored graveyard at Mercy Seat, and the medical student of that

[65] Minutes of the Board of Trustees, Randolph-Macon College.
[66] The widow of Dr. John Dillon became the second wife of Dr. John A. Cunningham and the mother of Francis Deane Cunningham, both for many years esteemed physicians of Richmond.
[67] Personal communications from President J. D. Eggleston of Hampden-Sidney, the late Richard E. Cunningham of Richmond, and Dr. R. M. Wiley of Salem.

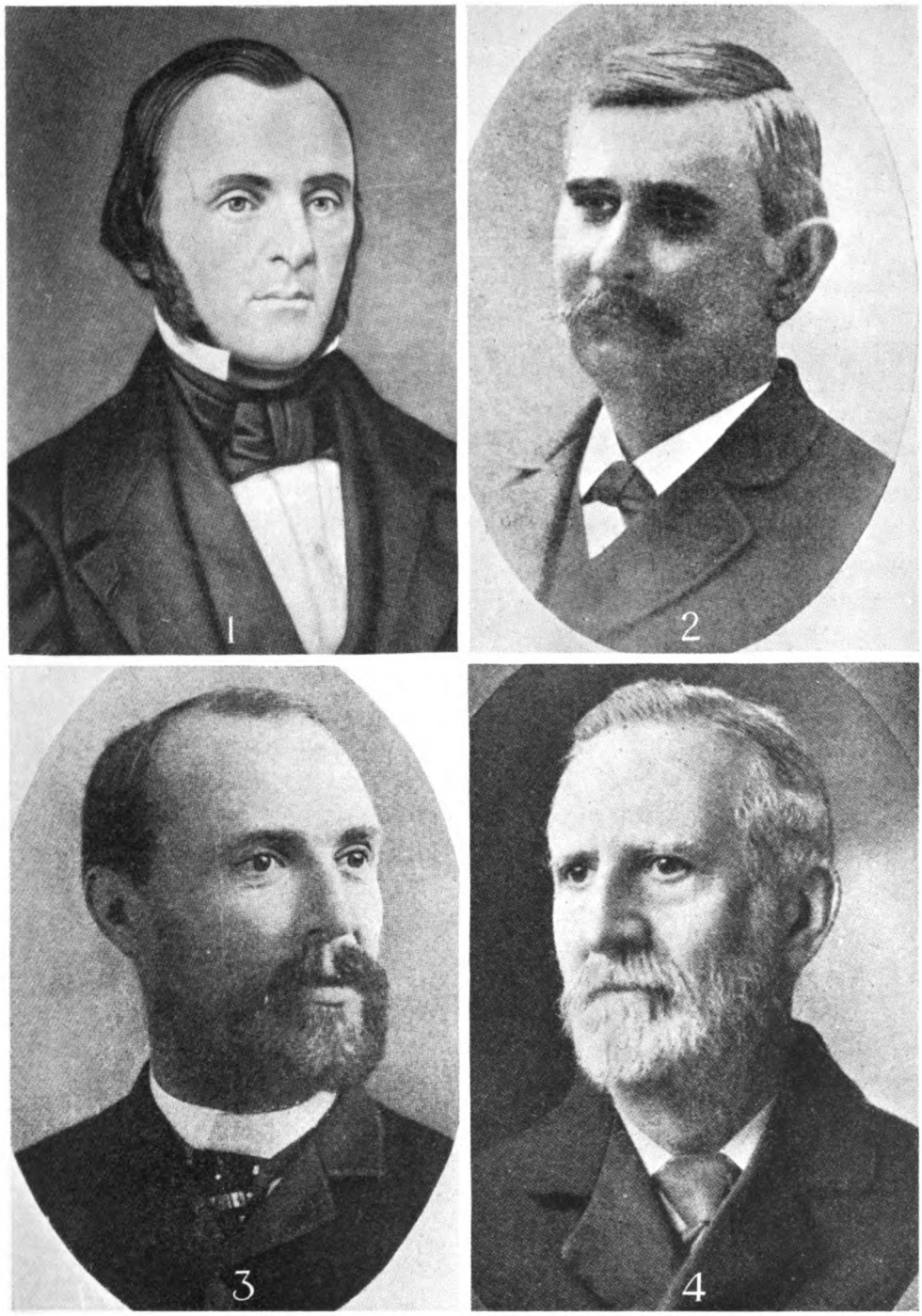
day was resourceful and self-reliant. A feature of Mettauer's instruction was the exercise required of all students in medical composition—frequent essays, or "memoirs" as Mettauer called them, must be written. Considering the isolation of the school one is surprised to find that "An infirmary is attached to the institution, into which numerous cases, both medical and surgical are admitted, affording students opportunities of witnessing such cases, and their treatment. Surgical operations are frequently performed in the Infirmary as well as in the neighborhood, to which students are generally admitted."[68] The inns and taverns of Kingsville (a mile distant) and Farmville (seven miles distant) and even the homes of the better people, housed Dr. Mettauer's patients and were the scenes of many of his remarkable operations.

A high opinion of the institution is expressed in the circular issued by the trustees, who felt justified in stating "that superior advantages are presented by their medical school for acquiring a thorough knowledge of medicine in all departments usually comprised in the curriculum of study of the best medical institutions of this country. The great length of the session; the practical manner of teaching; the experience of the faculty, as physicians and teachers; and the remoteness of the school from the scenes of dissipation and extravagance, they hope will commend it favorably, at least to the parents and guardians who desire to have their sons educated free from the contamination of city customs, and with moderate expense.

"This school has been acknowledged by some of the most distinguished medical institutions of the United States; among which may be mentioned the Jefferson School of Philadelphia; the University of the City of New York; and the University of Louisville—and its students admitted by those schools on their *ad eundem* footing; and the trustees confidently believe that its course of instruction will compare with that of any medical school in the Union for thoroughness and extent, as well as for the high grade of scholarship of its pupils."[69]

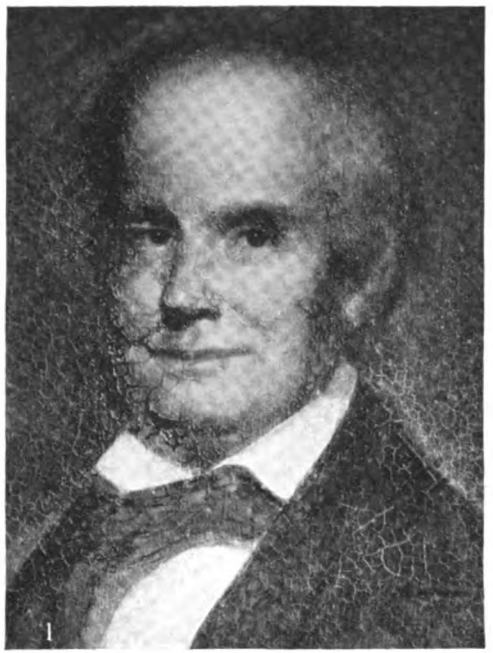
The Mettauers did more than establish a medical school in Prince Edward County. The record of the family goes back to the Revolutionary War, when the first of them appeared in Virginia. After the battle of Yorktown a regiment of French soldiers was stationed in Prince Edward County. An epidemic of smallpox carried away a number of the command and they were buried near the small village of Kingsville.[70] One of the surgeons who had fought the fatal disease was a gallant young Frenchman from Alsace, Francis Joseph

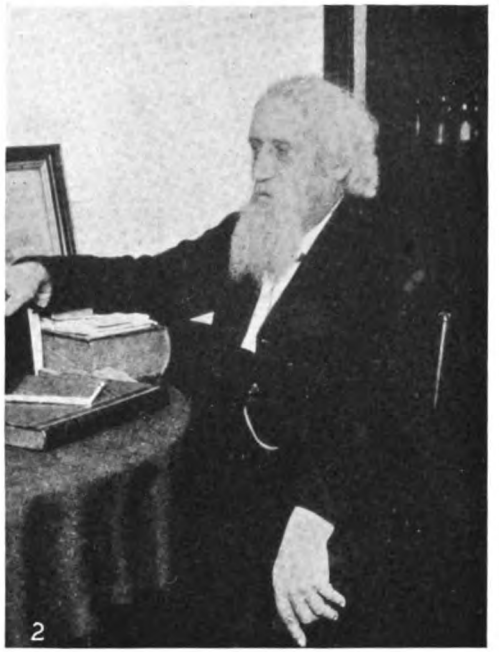
[68] Prospectus of the Medical Department, 1851-'52.
[69] Prospectus of the Medical Department, 1851-'52.
[70] This burying ground has recently been identified.



TEACHERS IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF VIRGINIA

1. James Lawrence Cabell. 2. William Beverley Towles. 3. William Cecil Dabney. 4. John William Mallet.





1. John Augustine Smith, from a portrait at William and Mary College. 2. Henry Archer Mettauer. 3. John Peter Mettauer.

Mettauer. Not long afterwards the troops were withdrawn, but Mettauer was persuaded by influential citizens of the county to remain and take up the practice of medicine. In the course of events he married Jemimah Gaulding, and to them were born two sons, both of whom became doctors. The younger and less well known was Francis Joseph Mettauer, Jr. He graduated in medicine from the University of Pennsylvania in 1811 with a thesis entitled *Conception.* He settled in Petersburg, Virginia, and little else is known of him.

The older brother, John Peter Mettauer, was born in 1787. A student at Hampden-Sidney Grammar School in Worsham in 1804, he matriculated at Hampden-Sidney College in 1805 and was one of the founders of the Philanthropic Literary Society. Anxious to begin the study of medicine, he appears to have remained only two years and did not graduate. On leaving he immediately entered the medical department of the University of Pennsylvania. Here he came under the influence of the greatest of our early medical faculties, Rush, Shippen, Wistar, and Physick, all of whom made a lasting impression upon him. He graduated in 1809 in a class of sixty-three, receiving the plaudits of no less a person than Caspar Wistar himself, who one day encountering him upon the streets of Philadelphia said, "My young friend, you have the means of success in your hands. Keep up your studious habits and nothing but sickness or early death can disappoint you." After further practical experience in the Philadelphia Dispensary young Mettauer returned to Virginia to assist his father. The elder Mettauer died in 1811 and left his son heir to a considerable estate and an extensive practice. But in 1812 the young man moved to Norfolk: the War of 1812, with the opportunity it afforded both to serve his country and to enlarge his experience, was the explanation for this move. By 1814 he was back in Prince Edward prepared to begin a professional career unsurpassed in this country for originality and volume of work accomplished.

John Peter Mettauer was a tall, austere man with black eyes and shaggy eyebrows, taciturn, business-like, industrious, exact, fond of reading and writing, with few intimates and many eccentricities. Contrary to custom, he went about not on horseback but in a comfortable carriage, reading while being driven. He lectured in kid gloves, was never seen at church or in social gatherings, and on all occasions appeared in a stovepipe hat, worn, it was believed, to hide his baldness. He was never without this strange headgear—at meals, in court, in sleep, for all that was known to the contrary. His coffin had to be made eight feet long in order that a lifelong custom might not be broken in death.

This remarkable man loved his native countryside, and though called to the professorship of surgery and surgical anatomy in Washington College, Balti-

more, it was but a few months before he resigned and was back in southside Virginia again.[71] He was a man of catholic medical interests, as his medical papers show. His lasting contribution, however, was chiefly in the realm of surgery, in which his reputation still remains unchallenged. He is said to have performed at a time when cocaine was unknown, more than eight hundred operations for cataract; to have been one of the first in this country (1827) to operate successfully for cleft palate, using an original method; and to have been the first to use iodine for scrofula. His most notable accomplishment was his operation for vesico-vaginal fistula, in which priority over both Hayward and Marion Sims is claimed for him. His first successful operation was performed in 1838. Later, in describing his technique, he wrote: "A two-bladed speculum . . . displayed the fistulous opening fully. . . . The free borders of the fistula were next denuded of their mucous membrane, by the use of delicate hooks to take hold of it, and scissors curved on their flat surfaces . . . to excise it beneath the hook. . . . For the purpose of approximating the denuded borders of the aperture and confining them in contact, metallic threads of pure lead of moderate size were employed."[72] Five years before Sims declared, "I conceived the idea of curing vesico-vaginal fistula," Mettauer had written, "I am decidedly of the opinion, that every case of vesico-vaginal fistula can be cured, and my success justifies the statement."[73]

Mettauer's surgery covered a wide range. Besides pioneer work in ligations of the carotid artery, resections of the superior maxilla, and amputations of the shoulder, he had operated for vesical calculus 79 times by 1853,[74] and before his death must have come close to Dudley's great record of 225. For stricture of the urethra he operated more than two hundred times, describing his methods as "intra-urethral and by the Rapho-perineal section." His first operation by the latter method was in 1836, several years before Syme, according to Mettauer's own claim.[75]

To the skill and daring of his surgery he brought the added accomplishment of the ingenious invention of instruments. A shop in which he and his students

[71] On October 13, 1835 he advertised his residence for sale in the Richmond Enquirer, being "about to remove to the city of Baltimore." On April 19, 1836 he again advertised, that he was back in Prince Edward County and prepared to "operate for stone."

[72] Virginia Medical and Surgical Journal, 1855, v. 4, p. 446.

[73] American Journal of the Medical Sciences, new series, 1847, v. 14, p. 117. Mettauer's first case was reported in the Boston Medical and Surgical Journal, 1840, v. 22, p. 154.

[74] Virginia Medical and Surgical Journal, 1853, v. 1, p. 1. Mettauer's biographers have claimed that he operated for stone more than 400 times, but as he himself stated the number to be 79 in 1853 when the period of his greatest activity was ended, the larger figure is undoubtedly an error.

[75] Boston Medical and Surgical Journal, 1872, v. 9, p. 397.

worked was maintained next to his hospital, and Peter Porter, a famous artificer of Farmville, assisted in the making of many instruments of silver and iron.[76]

Mettauer was an inveterate contributor to medical literature. Probably no Virginian of his generation wrote so much. His articles appeared in most of the periodicals of his day. The majority were written before 1856, although the *Boston Medical and Surgical Journal* published five long papers by him between 1870 and 1873. They deal with a variety of subjects. Of fifty-four articles of his examined, more than half are concerned with genito-urinary surgery; eight with vesico-vaginal fistula; nine with strictly medical conditions; four with puerperal fever. There is but one paper upon cleft palate (1837, *American Journal of the Medical Sciences*), but he was widely quoted on this subject. Many of them appear extremely long, but the editors of that day nevertheless consistently assigned them leading positions in their journals.

His *magnum opus* was an unpublished work on surgery, numbering more than three thousand manuscript pages. Dr. George Ben Johnston, who read this manuscript, said it showed "an intimate and enormous knowledge of all the directions that surgery in his time took."[77]

It is easy to understand how a man of Mettauer's character attained the reputation which brought him patients from all over the United States and called him to distant places. One of his trips to Georgia netted the unusual fee of $1,000. At the age of eighty-eight, still operating and still writing, he fell a victim to pneumonia and died November 22, 1875. He is buried in the College churchyard at Hampden-Sidney. He had been the husband of four wives and the father of thirteen children.

Of his sons, the eldest, Francis Joseph, survived his father and continued to practise in Prince Edward County. He was the ablest of the three, and about him we know most. He was born in Norfolk, May 24, 1818, was a student at Hampden-Sidney College in 1835, later transferred to William and Mary, and graduated there in 1837. In 1841 he became a student in the University of the City of New York, and two years afterwards graduated with the degrees of A. M. and M. D. He hastened home, and in 1844 became an associate in his father's Medical Institute. He also taught chemistry in the female seminary at Worsham and at Hampden-Sidney College; and when the Institute became part of Randolph-Macon in 1848 he held the chair of anatomy, physiology, and

[76] A number of Dr. Mettauer's own instruments were at one time in the hands of Dr. George Ben Johnston.

[77] George Ben Johnston: A Sketch of John Peter Mettauer of Virginia, in Transactions of the Medical Society of Virginia, 1905, p. 425. The manuscript, once owned by Dr. Johnston, cannot now be located.

chemistry. He is said to have declined a professorship in the University of Mississippi in 1854. In addition to teaching, though handicapped by a hernia, he successfully conducted a large practice. He died April 28, 1882, and is buried by the side of his father. A contemporary called him "not only talented, but a genius."[78] His brother, Henry Archer Mettauer, M. D., also a professor in the medical department of Randolph-Macon College, continued to live in Prince Edward until after the Civil War, when he located in Macon, Georgia. He, also, is buried at Hampden-Sidney. A third brother, Edward Mumford, graduated in medicine from Jefferson College in 1851, went to Florida, died quite young, and is buried there.

VII. MEDICAL DEPARTMENT OF HAMPDEN-SIDNEY COLLEGE

Talk of a medical school in Richmond had gone on for a number of years when in the summer of 1837 Augustus L. Warner, having resigned the professorship of anatomy and surgery in the University of Virginia, moved to Richmond and announced the opening of "an office for the reception of private pupils," to whose medical education he would "devote a large portion of his time." "The system of instruction," he promised, would "embrace a series of lectures and minute examinations upon the several branches of medicine, dissection, anatomical demonstration and surgical operations during the winter." The students would "have the use of an extensive and carefully selected medical library and a cabinet of the therapeutic preparations in general use."[79]

Other men were thinking along the same line, and before long he was joined by a group of well-trained young men in the organization of a medical college. On October 2, 1837 they petitioned the president and trustees of Hampden-Sidney to establish, under the privileges of its charter, their proposed medical school:

"We found our argument of the propriety of establishing a Medical School in the City of Richmond upon the facts—1st. That Virginia supplies a larger number of students to the neighboring Medical Schools than any other State in the Union. 2nd. That at the only Medical institution in Virginia, from its location, namely in the interior of the State, those practical advantages cannot be offered the student at this time, which should be given by a Medical School. 3rd. That in the city of Richmond the student may obtain every advantage which he could possibly possess in the Northern cities. From the peculiarity of our institutions, materials for dissection can be obtained in abundance, and we

[78] Obituary, Virginia Medical Monthly, v. 9, p. 324.
[79] Richmond Enquirer, June 6, 1837.

believe are not surpassed if equaled by any city in our country. The number of negroes employed in our factories will furnish materials for the support of an extensive hospital, and afford to the student that great desideratum—clinical instruction."[80]

On December 1, 1837 a resolution to establish the medical department in Richmond was presented to the board of trustees of Hampden-Sidney College. After serious debate it was adopted, and regulations for the management of the department were drawn up. Six professors were provided for, to be paid by student fees fixed by the faculty and limited to twenty dollars for each ticket. Graduation was contingent on a single course of five months (November to April), preceded by two years' study under some respectable practitioner, a thesis, and an oral examination.

The college opened its doors on November 5, 1838 at Nineteenth and Main Streets in the old Union Hotel, which had been converted into a hospital and college. It was a plain, four-story building, well adapted for the purpose. An enthusiastic contemporary declared that it "could not have been better adapted to its various uses, if originally designed exclusively for such objects. The general lecture room has been fitted up in a style of superior taste, and is large enough, we should judge, to contain with ease two hundred students. There are, besides, two other lecture rooms for the chemical and anatomical classes, and we confess we were very agreeably surprised at the extent of the anatomical museum, and, as far as an unprofessional spectator could judge, the completeness and excellence of the chemical apparatus. That however which must give peculiar value to the institution, is the presence of an infirmary within the walls of the building, in which the patients are provided with airy and comfortable rooms, attentive nurses, and constant medical attendance. The opportunity which is thus afforded for instruction at the bedside of the sick, by an easy and convenient transit from the lecture room, cannot it seems to us be too highly appreciated."[81]

The first catalogue of the college (1839) states that the number of students attending the first session was forty-six, all except six from Virginia. Fourteen of them received their degrees on April 4, 1839. The catalogue clearly set forth the advantages of the school. Attention was called to the "abundant supply of subjects for dissections and surgical operations on the *dead* body," and to the unexcelled opportunities for clinical instruction. "Attached to the College is an

[80] An Address to the Public in Regard to the Affairs of the Medical Department of Hampden-Sidney College, By several physicians of the City of Richmond, 1853, Appendix I.
[81] Southern Literary Messenger, 1839, v. 5, p. 827.

extensive Infirmary," and additional clinical material was supplied by the city hospital, the almshouse, the penitentiary, and the armory. The point was clearly made that the course offered was equivalent to that of any other college in the land. Good board in the neighborhood, including fuel, lights, and servants' attendance, was to be had for four dollars a week. The professors charged from fifteen to twenty dollars for their tickets, so that the total tuition amounted to about $135. Beginning with the session of 1839-1840 the student was required to complete two courses of four months each, the second a repetition of the first, and to pay a graduation fee of twenty-five dollars.[82]

Mordecai, writing in 1860, describes the early days of the College: "The Medical College is of modern date, having been established in 1837, by the united influences and exertions of Doctors Chamberlayne, Cullen, Warner, Maupin, and Bohannan. The Union Hotel was converted into a medical school and hospital. Limbs, instead of cutting capers, were cut in pieces in the ball-room—potions were mixed instead of punch—poultices supplanted puddings, and Seidlitz water, champagne."[83]

However favorable the impression made by the improvised college building, it had soon become inadequate, and the authorities initiated plans for a more modern clinical and teaching plant. The medical school began as a private venture, but the ambitious schemes of the faculty had quickly outgrown private pocketbooks, and the city of Richmond and the state of Virginia were appealed to for help. The city gave two thousand dollars with which to purchase the ground, and the legislature (February 9, 1844 and February 20, 1845) loaned from the Literary Fund twenty-five thousand dollars to be invested "in lands and buildings of the medical college."

In 1845 the catalogue announced that "The magnificent and commodious College Edifice has been completed." The site had been well chosen on Shockoe Hill, on the northeast corner of Academy Square, made famous by the quondam Academy of Quesnay and the theatre fire of 1811. It was in the center of the city, "in the immediate neighborhood of the boarding houses usually frequented by students of medicine." The building, a striking example of Egyptian architecture, was designed by Thomas S. Stewart of Philadelphia, who had shortly before completed St. Paul's Church. It contained "three Lecture Rooms; a spacious Chemical Lecture Room, capable of seating comfortably 750 persons, and arranged for the favorable exhibition of the experiments which are per-

[82] A later catalogue (1851) warned the student that "general bad spelling in a thesis and inattention to grammatical rules will preclude a candidate from an examination."
[83] Mordecai: Richmond in By-Gone Days, second edition, p. 226.

formed in illustration of the principles of the department taught therein. A general Lecture Room for the use of the Professors of Practice of Medicine, Materia Medica, and Obstetrics. The Anatomical Lecture Room has been constructed so as to enable the demonstrations to be exhibited in the most favorable manner, affording all the students an opportunity of seeing distinctly every point of the demonstration. . . . Adjoining the Anatomical Lecture Room is a spacious Dissecting Room, with all the conveniences and appliances which can contribute to the comfort and benefit of the student, being furnished with an abundant supply of water, and all necessary *appareil,* to render attractive the cultivation of Practical Anatomy, so often repulsive in our Medical Institutions."[84]

The infirmary, located in the same building, comprised "in its arrangements all the improvements and necessary apartments, embracing well ventilated wards and private rooms, for the accommodation of Medical and Surgical cases." Here *"surgical and medical cliniques"* were held regularly, affording the student a chance "to witness nearly all of the major and minor surgical operations; among which, we name the following: amputation at the shoulder joint, amputation of the thigh, amputation of the leg, extirpation of the mamma, operations for Hœmatocele, Hydrocele, Cataract, Fistula in Ano, Sinuses, Stricture of the Urethra, Excision of two-thirds of the lower jaw, treatment of fractures, with a variety of those lesser surgical operations which every physician is called upon to treat." The announcement, after excepting mental and contagious diseases, points out that "the accommodations for the sick are ample and complete in every respect, and the fees very moderate. The charges for board, medical attendance, surgical operations, nursing, medicines, and every necessary service, are only four dollars per week for colored patients, and five dollars for white.

"The medical and surgical wards are under the charge of Professors of the College for prescribed periods in rotation. The physician and surgeon visit their respective wards daily, and in cases of difficulty, the whole College Faculty are called in consultation without additional expense to the patient."

Small wonder that the reputation of the College grew apace and that students came in increasing numbers. The student body was soon doubled. The faculty, reacting to the agitation begun by the American Medical Association to improve standards of medical education, went on record in 1847 as fully admitting the importance of the subject and declared that they were prepared "to adopt what-

[84] Catalogue of the Officers and Students of the Medical Department of Hampden-Sidney College in Richmond, Virginia, Session 1844-1845. The new building was first occupied during the session of 1845-1846.

ever changes the Profession at large and the Schools may find expedient for carrying it out." In the meantime, however, "we do not propose without concert to make any hasty innovations. . . . Our requirements for graduation have always been at least as high as elsewhere."[85] At this time the course had been extended to five months, and attendance at two sessions was required.

The faculty during this period was composed of the leading physicians of the state. The founders, in particular, form an interesting group. First and foremost among them was Augustus L. Warner, who as dean and professor of surgery and surgical anatomy did more to shape the course of the College than anyone else. He was the animating force behind the whole venture. His bold and dexterous operations were applauded on all sides. A gentleman at one of his surgical clinics "remarked that more important operations had been performed by Dr. Warner before the medical class, during the last six months, than in any public institution in the country."[86] His lectures fascinated his students. It is said that other students on their way North, happening to hear one of his introductory lectures, frequently gave up all idea of going any further and matriculated in the Richmond school. Referring to the effect of one of these lectures a pupil of his wrote: "My heart seemed to pause, my breathing to rest—and then, after a deep inspiration, I felt that I had passed through a transporting dream. Not a student went farther north that year."[87] To the same admirer he was "a man of medium stature, exceedingly handsome face, brilliant blue eyes, soft, musical voice, easy and graceful manners, great fluency of speech, a mind of great penetration, grasp and logical power, a vivid imagination, and a refined, poetical taste." His lectures were pitched on a high ethical plane. To one of his classes he said, "Facts, opinions and theories will be passed in review before you. Theories must be discussed, errors must be exposed, and truth made triumphant." In 1846 Warner described the phenomena of inflammation, specifically mentioning the diapedesis of the white corpuscles as a prominent feature of tissue reaction to injury. Dr. T. Henry Green of London, who referred to Warner's work, observed that "from his description there can be little doubt that he actually observed the emigration of corpuscles."[88] Our present knowledge of the pathology of inflammation is based upon the work of Julius Cohnheim, who demonstrated the phenomenon conclusively in 1867. Little attention has been paid to the fact that Thomas Addi-

[85] Catalogue of the Session of 1846-1847. In 1851, however, the Stethoscope and Virginia Medical Gazette was still prodding the college to higher standards.
[86] Richmond Times and Compiler, July 11, 1845.
[87] Anderson: Brief Biographies, p. 20.
[88] Green: An Introduction to Pathology and Morbid Anatomy, 5th American edition, pp. 239-240.

son as early as 1849 reported this same observation, and no credit has been given to Warner, whose observations antedate both.

Warner was born in Baltimore in 1807. He graduated in medicine from the University of Maryland in 1829. Shortly after this he conducted a private dissecting room in Cider Alley, just in the rear of the University of Maryland, and gave private lectures on anatomy, physiology, and surgery, besides lecturing on the same subjects in the Medical Institute of Baltimore. After "delivering with great reputation private lectures . . . in Baltimore for the last four years,"[89] in 1834 he was unanimously and unsolicitedly appointed by the Board of Visitors of the University of Virginia professor of anatomy, physiology, and surgery, a position he held for three years. His brilliant career was terminated May 6, 1847—just ten years after his arrival in Richmond—by an attack of what at that time was called neuralgia of the abdominal plexuses, very likely a coronary accident.

The first professor of practice of medicine in the College was John Cullen (1797-1849). He was born in the city of Dublin, studied at Trinity College, then made his way to Paris where he learned French and a little medicine, and in 1815 returned to his native land. Shortly after this he appeared in New York City and found work as a chemist. Medicine, however, was his goal, and at the University of Pennsylvania he realized his ambition when Professor John Syng Dorsey took him as his private pupil and befriended him. In after years Cullen named a son for his beloved professor. About 1820 he made a trip to Virginia, ostensibly to confer with Mr. Jefferson in regard to a position at the University of Virginia. A serious illness delayed him in Richmond, and he was persuaded to locate permanently in the city for practice.

The tall, red-faced young Irishman of twenty-three was a fine specimen of manhood, who dressed handsomely and usually appeared on the streets in a closed carriage drawn by two fine roans. Employing business methods in advance of his day and a full-time male secretary, he rapidly acquired a large practice, eventually building a comfortable house on the corner of Ross and Governor Streets with commodious offices on the first floor.[90]

Cullen, the teacher, was considered a classroom orator. His lectures, usually preceded by the formality of taking snuff from the gold snuffbox always in evidence, are said to have charmed his listeners. He possessed ready wit and satire, made the more effective by his fluent Irish brogue.

[89] American Journal of the Medical Sciences, 1834, v. 14, p. 530. Advertisements of his lectures appeared in the Journal in 1831, 1832, and 1833.

[90] This house in later years became the original St. Luke's Hospital.

Cullen's practice was typical of the time. He was a bold therapeutist, employing freely the lancet, calomel, and opium. He treated acute pleurisy with copious phlebotomy, followed by four grains of opium and the application of a blister. For mumps he gave large doses of calomel, followed by a Seidlitz powder every four hours. If too severe purging ensued, four grains of opium turned the scales.

Thirty years of incessant work left Cullen an ill man. Vainly seeking help in Philadelphia he returned home to Richmond to die of softening of the brain in 1849.[91]

The professor of materia medica and therapeutics was Lewis Webb Chamberlayne (1798-1854) a Virginian of proud ancestry. His father was Edward Chamberlayne, his grandfather William Chamberlayne, who married Wilhelmina, daughter of Colonel William Byrd of Westover. Lewis was born at Windsor Shades, King William County, in 1798. At the age of seventeen or eighteen he journeyed to Philadelphia and matriculated in the University of Pennsylvania. He graduated in a class of eighty-seven in 1817 with a thesis entitled *Intermittent Fever.*

In 1820 he married Martha Burwell Dabney. Thirteen children came of this union. One of them, Mrs. George W. Bagby, distinguished for her humor and good sense, was particularly beloved in Richmond. The Chamberlaynes lived first at 197 West Main Street; later at Montrose in Henrico County, adjoining Brook Hill, then owned by his sister's husband, Mr. Williamson.

Chamberlayne's connection with the medical department of Hampden-Sidney College continued until his death. Of him a pupil wrote: "the professor of materia medica was a pleasing lecturer but a very close follower of the textbooks." There is no record of his having made a contribution to medical literature—very few of this first faculty did. He wrote, however, for the lay press articles applauded for their force and vigor. In practice he was violently opposed to bleeding.

Chamberlayne was fifty-six years old when he died. The editorial encomiums which appeared in both the Richmond *Whig* and the *Daily Dispatch* characterized him as an old Virginia gentleman endowed with peculiar nobility and elevation of character. His fine memory and gifts of conversation made him popular in any company. His character was distinguished by gentleness, unbounded generosity, and a sincerity that brooked no dissimulation.

The first professor of chemistry and pharmacy at the College was Socrates Maupin (1808-1871), "a modest, quiet little gentleman" who made teaching

[91] Charles Shields: Memoir of Dr. Cullen, Atlantic Journal of Medicine, October, 1883.

a profession. He was born in Albemarle County, November 12, 1808, a descendant of Gabriel Maupin, Huguenot immigrant to Virginia in 1700. In 1828 he graduated from Washington College and two years later received his M. D. degree from the University of Virginia. Anticipating a teaching career he entered the academic department of the University, and for three years confined himself to general literary and scientific studies, in 1833 receiving his M. A. degree—considered a difficult course at that time. A call to the chair of ancient languages at Hampden-Sidney followed. Here he remained for two years, leaving in 1835 to become principal of the Richmond Academy. Three years later he established in Richmond a classical and mathematical school of his own. At the same time he joined in founding the medical department of Hampden-Sidney, and in 1847 succeeded Warner as dean. In 1853 he was called to the chair of chemistry in the University of Virginia medical school. The next year, in recognition of his administrative gifts, the board of visitors elected him chairman of the faculty, a position corresponding to that of president; and for sixteen years—longer than any of his predecessors or successors—he held this responsible position. Death came to him suddenly on October 19, 1871, when in a fall from a runaway carriage he sustained a fatal head injury.[92]

The only mature man in a faculty of strikingly young men was the professor of obstetrics and diseases of women and children, Richard Lafon Bohannan (1790-1855). To his students he seemed a "rather old man—not gifted as a lecturer, but of solid practical information, which he conveyed with some degree of impressiveness."[93] When he died of valvular disease of the heart in 1855, he was the last member of the original faculty in harness, all the others having died or resigned before him. He was a pioneer in Virginia in obstetrics as a specialty in the modern sense and the first to teach this subject as such. He had an extensive lying-in practice. It was said that for years he delivered an average of 150 pregnant women annually. He was a charter member of the old Medical Society of Virginia. His medical diploma, received in 1811 at the University of Pennsylvania, is in the possession of his grandson, Dr. W. B. Lorraine of Richmond. His father was Joseph Bohannan, of Scotch descent, his mother Elizabeth Lafon Bohannan, daughter of Colonel Richard Lafon, who served under La Fayette in the Revolutionary War.[94]

[92] Virginia Clinical Record, 1871-'72, v. 1, p. 252. Tyler: Cyclopedia of Virginia Biography, v. 2, p. 229. J. C. Egan, Old Dominion Journal, 1902-'03, v. 1, p. 35.
[93] J. C. Egan, Old Dominion Journal, 1902-'03, v. 1, p. 35.
[94] Virginia Medical and Surgical Journal, 1855, v. 5, p. 164.

The professor of anatomy and physiology was Thomas Johnson,[95] who had moved to Richmond in 1834 from the University of Virginia where he had been demonstrator of anatomy from 1827 to 1832 and professor from 1832 to 1834.[96] In the latter year a request of the students that his salary be raised was denied, and Johnson resigned. In Richmond he associated himself with Drs. Beale, Briggs, and Haxall in the short-lived Richmond Medical School, and when the Hampden-Sidney school was organized in 1838 he was the logical choice for the chair of anatomy. His tenure of office, however, was brief. Charges were preferred against him, and he resigned in 1844. Little is known of him after this. He appears in 1846 in Ellyson's directory, living at 36 West Main Street. Dr. William H. Taylor, who graduated at the Medical College in 1856, wrote: "I first knew Dr. Johnson soon after I graduated. I invited him to share my office, hoping through this association to be improved by his knowledge and experience. I gained experience, no doubt, but lost all my patients, everybody who applied choosing the old doctor in preference to the new."[97]

A pupil of Johnson's described him as a strong and forceful man as well as an able lecturer: "I recollect that he had charge of the almshouse, which was two miles out from the college, and we delighted to follow him there for his clinical instruction. He had at that time recently returned from Paris, and was full of Laneck's [Laënnec's] investigation of tuberculosis, also of Bichart's [Bichat's] pathological anatomy. On one occasion he marked with chalk on the chest of a poor man dying of typhoid fever the exact site of an abscess caused by the breaking down of tubercles . . . postmortem examination showed the cicatrix in the lungs precisely as Dr. Johnson had indicated."[98]

Thomas Johnson was succeeded by the ablest anatomist who ever occupied that chair in the College—Jeffries Wyman (1814-1874). He was in Richmond only three brief years, but the emphasis given anatomy and the improvement made in the anatomical museum during that period long persisted. The dissecting room at this time was described as convenient, spacious, and attractive.

Wyman's influence is seen in the catalogues of 1845 and 1846, which solicited "contributions to their Anatomical and Pathological Museum" in the form of post-mortem or operative specimens, as well as "any fossil bones, shells, impressions or minerals" from those residing in coal or marl regions. Wyman returned to his native Boston in 1847 to accept the Hersey professor-

[95] Robert Munford was the first demonstrator of anatomy.
[96] Davis: History of the Medical Department of the University of Virginia, 1825-1914, p. 4.
[97] Taylor: Old Days at the Old College, Old Dominion Journal, 1913, v. 17, p. 75.
[98] J. C. Egan, Old Dominion Journal, 1902-'03, v. 1, p. 35.

ship of anatomy in Harvard College. Here he established that famous museum described by Oliver Wendell Holmes,[99] and became "a master in the field of comparative anatomy and paleontology."[100]

Dr. Cullen's failing health brought to the chair of medicine for a single year, 1848-1849, a gifted young man, Meredith Clymer (1817-1849). A graduate of the University of Pennsylvania and a postgraduate student in Europe, he was professor of the practice of medicine in Franklin Medical College when summoned to Richmond. His subsequent career was marked by many honors, first as professor of medicine in the University of the City of New York, then as professor of nervous and mental diseases in Albany Medical College. His latter years were spent in his native city of Philadelphia, where as a pioneer neurologist he did much to advance that specialty. He edited several works and journals.

In the faculty during this early period several other names appear worthy of mention. A. E. Peticolas was attracting attention as demonstrator of anatomy as early as 1849 and became professor in 1855. Charles Bell Gibson (1816-1865) succeeded Augustus L. Warner in 1847 in the chair of surgery and began a long period of conspicuous service to the College. David H. Tucker (1815-1871) followed Meredith Clymer in 1849 and began an equally long tenure of office.

Carter Page Johnson succeeded in 1847 to the chair vacated by Jeffries Wyman. He was the son of Chapman Johnson, of Richmond. Here he was born March 18, 1822. With an M. A. from the University of Virginia in 1840 and an M. D. from the medical department of Hampden-Sidney College in 1842 he early gave promise of a successful life. He became active in the Medical Society of Virginia, wrote a number of worth-while articles on medicine, and in 1847, after having already served a term as an "efficient and highly competent demonstrator," was elected to the chair of anatomy in his Alma Mater. In the summer of 1855 he went abroad for study and rest. Returning on the *Arctic* he was drowned with all on board when the ship foundered. Many friends testified to his well-poised mind, affectionate disposition, and integrity of character.[101] Although his professional activity lasted only thirteen years, his name appears six times in Smith's list of important papers published by American surgeons between 1783 and 1854. His colleague, Charles Bell Gibson, with six papers, and Dr. Mettauer, with nine, were the only Virginians who equalled Johnson's record in this respect.[102] The articles covered a wide

[99] Atlantic Monthly, November, 1874.
[100] Kelly and Burrage: Dictionary of American Medical Biography, p. 1341.
[101] Virginia Medical and Surgical Journal, 1855, v. 5, p. 341.
[102] Smith: System of Operative Surgery, v. 1, p. 54.

range of surgical subjects. They appeared in the *Stethoscope* and the *Medical Examiner.*

The medical department of Hampden-Sidney College dissolved in a bitter controversy, featured by newspaper articles, a pamphlet warfare, and a notable fight before the legislature. Both sides employed counsel, and formidable arguments were prepared and circulated. There was no denying the fact that the medical faculty was a closed corporation, that since 1838 it had virtually dictated to the trustees of Hampden-Sidney College in the matter of the appointment of professors, and that it was jealous of its appropriated rights. Equally true was the fact that its standards were inadequate. Perhaps it was not as bad as its critics declared it to be, but there were few requirements in the matter of preliminary education. "An attendance upon two courses of lectures of four months each, the second being a repetition of the first, together with evidence that the tickets have all been paid for, constitute the only indispensable prerequisites to graduation and the Doctorate."[103] Moreover, there was money in the job—between $500 and $1,000 annually to each professor.

This was a vulnerable situation. Concerning it as many as twenty-two physicians of Richmond memorialized the Hampden-Sidney board of trustees in July 1853. Among them were John Dove, John Cunningham, James Bolton, Robert W. Haxall, and Robert G. Cabell. The move had been preceded by a rumor that Dr. L. W. Chamberlayne, occupying the chair of materia medica and therapeutics, was fatally ill. Speculation as to his successor was rife. Certain members of the Richmond profession approached the Reverend Moses Hoge, local member of the Hampden-Sidney board of trustees, in favor of Goodridge A. Wilson. The faculty got wind of it. An unfortunate article appeared in the Richmond *Whig,* asserting the right of the medical faculty to appoint its own professors. A new chair of physiology and medical jurisprudence was proposed at this time, and on June 14, 1853 the faculty nominated Martin P. Scott. The board, however, elected Goodridge A. Wilson, for the first time overruling a recommendation of the faculty. The trustees had "preferred, so long as it was a question of choice, and not of principle, to confirm the Faculty's selections of Professors, rather than make selections of their own."[104] But in this instance they felt compelled to defend a principle—the inalienable right granted them in the charter of the college to appoint members of the faculty. Flat rebellion followed. The medical faculty refused to recognize Dr. Wilson.

[103] Address to the Public in Regard to the Affairs of the Medical Department, etc., by several Physicians of Richmond, 1853, p. 22.

[104] Address to the Public in Regard to the Affairs of the Medical Department, etc., by several Physicians of Richmond, 1853, p. 14.

Not content with this, they issued a pamphlet assailing the motives of the trustees, branding the appointment of Dr. Wilson as a sectarian movement.[105] They also bitterly assailed the twenty-two Richmond memorialists as meddlers in their private affairs and possessed of an itching desire to oust them, from personal and selfish motives. Their opponents retorted that they had urged upon the board of trustees the election of Dr. Wilson "to establish and assert the principle, that in the public institution committed to their trust, built and based upon public funds, the appointing power should exercise the widest range of selection, and candidates have untrammeled access to the appointing power."[106] In spite of the fact that counsel pointed out that the legislature of Virginia can grant new charters for medical colleges but "that they can pass no act that will affect the rights of Hampden-Sidney College in the Medical College as existing under its present charter, and that Hampden-Sidney has rights in that College,"[107] the legislature decided in favor of the medical faculty, dissolved the connection with Hampden-Sidney, and gave them a charter of their own, the college being hereafter known as the Medical College of Virginia.

VIII. THE MEDICAL COLLEGE OF VIRGINIA

The reorganized school in Richmond was now a state institution under a board of visitors appointed by the governor and vested with full powers to fill vacancies on the faculty. From the first it was in hot water. Hard words had been said and bitter enmities had been aroused in the profession at large. The disgruntled friends of Goodridge A. Wilson opened a fierce assault through the columns of the *Stethoscope,* of which he was editor. Particularly bitter were the strictures of R. A. Lewis, his coeditor. Before the controversy ended some of the harshest words ever published in a Virginia medical journal had been hurled back and forth, and the pages of the 1855 issue still speak eloquently of it. The storm spent its fury chiefly against Beverley R. Wellford, spokesman for the faculty, who succeeded Chamberlayne in 1854 as professor of materia medica. The charges were that as trustee and later as professor in the Medical College he had failed to put into effect the very reforms he had advocated in his presidential address before the American Medical Association in New York; that "he 'earnestly sought' an appointment in a northern school where he was to be used as an attraction, a bait for Virginia students"; that he was

[105] Dr. Wilson was a member of the Presbyterian Church.

[106] Address to the Public in Regard to the Affairs of the Medical Department, etc., by several Physicians of Richmond, 1853, p. 17.

[107] Address to the Public in Regard to the Affairs of the Medical Department, etc., by several Physicians of Richmond, 1853, p. 58.

disloyal in sending his sons to a Northern medical school;[108] and that he was a partner in an establishment in Fredericksburg "secretly engaged in the sale of quack medicines."[109]

Against all this Dr. Wellford struck back vigorously, often sarcastically, calling the *Stethoscope* "a southern journal with northern principles" and his critics "ultra reformists" with a grudge against the Medical College.

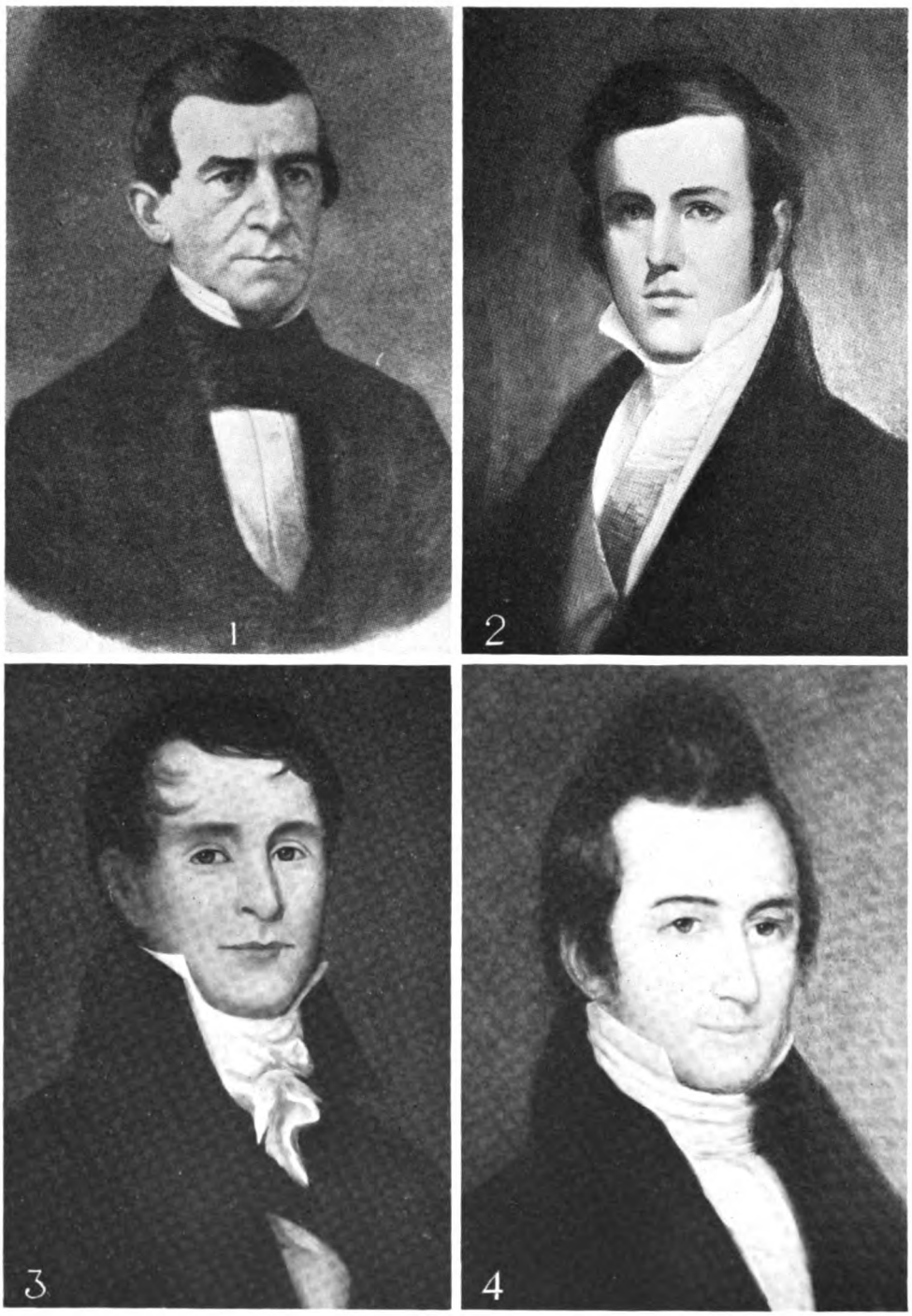
The board of visitors did not escape criticism. "We presume," opined an editor in 1855, "the profession feel some curiosity in regard to the sudden appointment of another member of the board of visitors to a chair among the faculty, and that too without public notice of its vacancy."[110]

Everybody seemed to know better than the faculty how to operate a medical school. For years the medical journals of Virginia as well as the state Society had been preaching reform in medical education, demanding "a liberal spirit in the amplification of the course and prolongation of the term of instruction."[111] The defence argued that "if we require more than two sessions, or demand a more thorough knowledge of medicine before granting a diploma, while other and rival schools are graduating students at lower rates, why our lecture rooms would soon be empty."[112] The belief lingered in some quarters that the reorganized College was still a private monopoly, run to gratify personal ambition, and that professorships were bestowed on favorites. The words of the American Medical Association's report on medical education were recalled and republished: "the temple of American science ought not thus to be made a house of merchandise." The agitation that went on in Virginia was but a small part of a struggle that involved the profession of the whole country. The *Virginia Medical Journal* feared that the very existence of the American Medical Association was threatened by "the feud between the professors and the laity; the quarrel between the ins and the outs. . . . The time of each session . . . is more and more encroached upon by the struggles . . . between the hungry assailants outside of the colleges and the desperate professors within."[113]

Not unnaturally, criticism in Virginia of the Medical College resulted in renewed efforts at amalgamation with the University of Virginia. James B. McCaw advised in 1853 and again in 1857 that "the medical department of

[108] Stethoscope, 1855, v. 5, p. 490.
[109] Stethoscope, 1855, v. 5, pp. 474-489.
[110] Stethoscope, 1855, v. 5, p. 304. The new appointee was Dr. L. S. Joynes. Dr. Wellford, another member of the Board of Visitors, had been appointed to the faculty in 1854.
[111] Stethoscope and Virginia Medical Gazette, 1852, v. 2, pp. 289-314. The University of Pennsylvania and Jefferson were requiring three years in 1852.
[112] Stethoscope and Virginia Medical Gazette, 1852, v. 2, pp. 72-78.
[113] Virginia Medical Journal, 1857, v. 9, p. 160.

"Tickets"



FOUNDERS OF THE MEDICAL COLLEGE OF VIRGINIA

1. Socrates Maupin. 2. John Cullen. 3. Richard Lafon Bohannan.
4. Lewis Webb Chamberlayne.

the University might be transferred to Richmond, and a coalition between the two schools thus produced." Although the University defeated this move, amalgamation was discussed and fought over many times after this.

Accessions to the Richmond faculty during this period included Martin Pickett Scott, who succeeded Socrates Maupin in the chair of chemistry and pharmacy in 1853 and continued to teach until 1858. He was born in Virginia in 1823, graduated in medicine in 1846 at the University of Pennsylvania, and later studied in Paris. During the war he served as surgeon in the Confederate States army. He then went to a professorship in Washington University, Baltimore, still later becoming professor of agriculture and biology at the Virginia Polytechnic Institute.[114]

Arthur E. Peticolas was elevated from demonstrator of anatomy to full professor in 1855. He inherited gifts as a lecturer, writer, and painter from his father, Edward, a man of some talent though of erratic mind, and from his grandfather, Phillippe, who left college for love of adventure, served eight years under the king of Bavaria, and painted a miniature of George Washington from life.[115] In 1866 Professor Peticolas resigned the chair of anatomy on account of his health and later accepted a similar professorship in the New Orleans Medical School.[116]

James H. Conway occupied the chair of obstetrics from 1856 to 1865. He graduated in medicine from the Medical College of Virginia in 1841 and was generally recognized as a bright and attractive professor.

For a single session, 1854-'55, a man of international reputation taught in the school, Charles Edward Brown-Séquard (1817-1894). For him the chair of the institutes of medicine and medical jurisprudence was created, and with almost breathless expectation the College and the community awaited the great savant. The object of so much interest was born in Mauritius, April 8, 1817, of an English father and a French mother. Educated in France, his interest in experimental physiology became a lifelong passion exceeded only by a strange restlessness that carried him three times to America, once to England, and ultimately back to Paris. Before he appeared in Richmond he had already attracted attention by his experimental hemisection and transection of the spinal cord (1849), by his description of hemiplegia with crossed anæsthesia (1850), and by his confirmation of the work of Claude Bernard on the sym-

[114] Hayden: Virginia Genealogies, pp. 586, 646.
[115] William and Mary College Quarterly, 1893, v. 2, pp. 30-33.
[116] Catalogue, Medical College of Virginia, 1866-'67. Peticolas was an artist of no mean ability. The late E. V. Valentine studied anatomy under him and in turn taught art to a later incumbent in the chair of anatomy in the College, John W. Broadnax.

pathetic nervous system. He had already begun the experimental production of epilepsy, and an address of his before the Richmond Medical and Chirurgical Society dealt with this subject.

An intimate description of this great but eccentric genius at work in Richmond has been left by one of his pupils, Dr. William H. Taylor, who relates that soon after his arrival Dr. Brown-Séquard's many "assiduous assistants among the students had gathered together for him an innumerable caravan of dogs and cats and raccoons and terrapins and specimens of nearly every other variety of the inferior forms of animal life which roamed the fields or the waters or the streets or the housetops of Richmond and Henrico County, and all these were quartered in harmonious juxtaposition with one another in the depths of the college cellar.

"The setting-up of Dr. Brown-Séquard's physiological menagerie in the cellar was an epoch-making event for the inmates of the building. White-winged peace, as the class poet said in the elegy which he composed for the occasion, had folded her sable pinions and flown like an affrighted torrent to the mountain tops. In the night season especially, when we suddenly roused to a full realization of the roarings and bellowings which ascended from the abyss below, it was almost impossible to doubt that we had died and come to our reward. I and the other house students being blessed with youth and innocence were able to snatch sufficient sleep to live through it, but the janitor and his wife aged rapidly, and would have perished from insomnia and compound-comminuted delirium tremens if the menagerie had held together a month longer.

"Very notable, too, was the influence exerted by this uproarious zoölogical combination upon the colored people of the town. The conception which these worthy beings have of this college as a holy temple dedicated to the culture of the beneficent arts has at all times been alloyed with many grave misgivings, but now they looked upon it as a place thrice accursed and in full and indisputable possession of the devil and his angels, and they kept aloof from us to the utmost limit that the topography of the neighborhood allowed. . . .

"Dr. Brown-Séquard, however, never hesitated to put himself to the question if he thought thereby he could obtain a more satisfactory answer than cats and dogs could give. Accordingly, in studying the phenomena of digestion, he let down into his stomach pieces of sponge tied to the end of strings and therewith fished up material for subjection to the processes of science. He did it so zealously that at length the constant titillation of the organ turned him into a sort of cow, his food as fast as he got it down insisting on coming back

into his mouth to be chewed over and over again. A disorder of this kind, which would make any other man hang himself, was no doubt to one of his inquiring spirit a source of unspeakable satisfaction, for it was of great rarity, so that he was in possession of a new and delightful field of research all to himself. So, too, in studying the functions of the skin, in order to elucidate some abstrusity that he never made altogether clear to us, he covered himself with a universal coat of the stickiest and most impervious fly-paper varnish—an experiment which, as he, perhaps with some indignation, informed us, would have yielded the most valuable results had not some obtrusive individual extracted him from the corner into which the varnish had tumbled him, and, just as he was fetching his last gasp, maliciously sandpapered him off. . . .

"So it came to pass that Dr. Brown-Séquard and his colleagues fell asunder. The cause of this estrangement I do not know with sufficient exactness to justify me in stating it. He stayed with us for only one session. Howsoever his departure may have affected the faculty, it grieved the students deeply. We regarded him as a mighty though inscrutable pillar of our college. . . .

"I will say that perhaps the most obvious trait of his character was an earnest desire for full and accurate knowledge. This he sought by the only method which science can recognize—the method of observation and experiment. In this he was untiring, observing and experimenting to his latest day, and I can easily believe that even in his dying hours, when the silver cord—that marvelous warder of our mortal frame whose divinely wonderful energies had ever had a peculiar charm for him—was loosening, the ruling passion was strong within him, and that the old philosopher enjoyed a sublime delight in noting the majestic progress of this his last supreme experiment."[117]

The Civil War shut the mouth of criticism and offered the College an opportunity for service which she loyally accepted. Teaching went on in spite of countless difficulties—increased expense of operation, military duties imposed upon the faculty, battlefields almost in sight of the College buildings. "In announcing a course of Lectures under the present circumstances," the authorities confessed, "the Faculty are not unaware of the difficulties which they will encounter . . . but it has not seemed to them necessary or wise, that the business of education, and especially of medical education, should be suspended during a state of war."[118] The reasons were obvious: there were those "who have been discharged from the service, or are exempt from military duty by reason of phy-

[117] Taylor, William H.: Old Days at the Old College, in the Old Dominion Journal, 1913, v. 17, pp. 89-93.
[118] Catalogue for session of 1862-'63.

sical disability . . . and to all such, as well as to the medical students employed in the numerous hospitals of Richmond" a medical education was both proper and necessary. The very exigencies of the war demanded replacements in the medical department of the army. The patriotic duty of the College was clear.

Heavy demands were made upon it even before secession. Following the John Brown raid in 1859 excitement ran high in both the North and the South. In Philadelphia there was immediate action under the leadership of F. E. Luckett and Hunter McGuire, who at the time were conducting a private "quizzing class" there. Rallying the Southern students they proposed to transfer the entire body to Southern schools. They successfully carried out this bold plan—which reduced the enrollment at Jefferson alone by one-half. The faculties of the medical schools at Richmond, Charleston, and other Southern towns voted to receive the seceding students without charge, the city of Richmond voted funds to defray traveling expenses, and during December 1859 over three hundred students from Northern medical schools reached Richmond. About 140 of them matriculated at the Medical College of Virginia, and fifty-six of these graduated the following March.[119] Upon the arrival of the students in Richmond they were welcomed by the faculty and students of the College, the military, and many citizens. In triumphant procession they marched to the Capitol Square, where before a large concourse they were addressed by Governor Wise and Professor Gibson. A banquet that night at the Columbian Hotel, attended by more than six hundred guests, completed the enthusiastic reception.[120] Rumors, circulated in Philadelphia, that the faculty of the Medical College had bribed Luckett and McGuire to head the revolt with promises of preferment were indignantly denied by the College and were proved to be false.

Most of these students remained in Richmond to continue their medical course. The records of the College show that the enrollment, which for years had hovered around seventy, more than trebled during the session 1859-1860.[121] For the period of the war it continued high. In 1859-1860 it was 228; in 1860-1861, 148; in 1861-1862, 67; in 1862-1863, 110; in 1863-1864, 155; in 1864-1865, 155. During this time the College conducted two sessions a year.

[119] Maryland and Virginia Medical Journal, 1860, v. 14, p. 84. Catalogue of the Medical College of Virginia, session of 1859-'60.

[120] About this time it was reported in several Northern journals that the seceding students were disappointed with the instruction they were receiving in Richmond. To counteract this report this group of students met on January 23, 1860 and affirmed their satisfaction with the Medical College of Virginia, asserting that "the Faculty . . . are fully equal, if not superior to those of the Northern Schools we left, and, in some respects, the facilities of medical instruction are greater." On the committee which drafted the resolutions there were, from Virginia, Emmett A. Drewry, J. W. McIlhany, and John B. Fontaine. Maryland and Virginia Medical Journal, 1860, v. 14, p. 344.

[121] One hundred and nineteen of the new students were from Jefferson, fifteen from the University of Pennsylvania.

The war faculty was a strong one. Peticolas was still in the chair of anatomy and Conway in obstetrics. Levin S. Joynes was teaching the institutes of medicine, and James B. McCaw had succeeded Martin Scott in 1858 in the chair of chemistry and pharmacy. The three most distinguished members barely survived the cessation of hostilities. Charles Bell Gibson (1816-1865), orator, soldier, and surgeon, died April 23, 1865, after occupying the chair of surgery nearly twenty years. He was one of the first in Virginia to employ anæsthetics, reporting in 1848 five cases in which ether or chloroform had been successfully used.[122] Three years later he was one of a committee which made a valuable and extended report to the Medical Society of Virginia on the same subject.[123] His article on *Osteo-Sarcoma of the Lower Jaw, Amputation and Cure,*[124] was listed by H. H. Smith among the special papers marking progress in American surgery before 1854, as were also his articles on *Strangulated Scrotal Hernia* and *Extirpation of Testis.*[125] He made further contributions to surgical literature in articles dealing with *Aneurism of both Femoral Arteries Cured by Ligature,*[126] *Dislocation of the Femur Into the Foramen Ovale,*[127] *Staphylorrhaphy,*[128] and *Harelip.*[129]

Gibson assumed the duties of his chair in 1848, coming to Richmond from the professorship of surgery in Washington College, Baltimore. At the beginning of the war Governor Letcher appointed him surgeon general of the state of Virginia, and he continued to serve in this capacity until the separate military forces of the states were absorbed by the Confederacy. His father and first teacher was William Gibson, noted professor of surgery in the University of Pennsylvania, whose fine "surgical museum" became a part of the Medical College of Virginia's apparatus in 1855.[130]

The second of the three members of the war-time faculty who survived the hostilities only a few years was Beverley Randolph Wellford (1797-1870). He was a native of Fredericksburg and the ninth child of Robert and Catherine Yates Wellford. Both his father and grandfather were physicians. His medical education was received in the University of Maryland, from which he graduated in 1817. After two years' postgraduate work in Baltimore he joined his father in the practice of medicine in Fredericksburg. Here he was a prominent figure

[122] Transactions of the American Medical Association, v. 1.
[123] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 1.
[124] American Journal of the Medical Sciences, 1842, v. 4, p. 278; 1844, v. 8, p. 332.
[125] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 139; 1851, v. 1, p. 145.
[126] American Journal of the Medical Sciences, 1847, v. 12.
[127] Virginia Medical and Surgical Journal, 1855, v. 4, p. 209.
[128] Virginia Medical Journal, 1856, v. 6, p. 186.
[129] Virginia Medical Journal, 1857, v. 9, p. 365.
[130] Catalogue of the College, session of 1854-'55.

for thirty-five years. Not only was he honored with the presidency of the old Medical Society of Virginia (1852) and the American Medical Association (1853), but he was also active in outside interests, being a partner in the Peck and Wellford Stage Line and president of the Fredericksburg and Gordonsville Railroad. He was called to Richmond in 1854 to succeed Dr. Chamberlayne as professor of materia medica and therapeutics and became a prominent figure in the faculty until his resignation in 1868. He was twice married and the father of nine children. The eldest son, John Spotswood, after falling heir to his father's practice in Fredericksburg, followed him to Richmond and in 1868 succeeded him in the chair of materia medica and therapeutics.

In 1869 ill health closed the teaching career of another professor who had served the College for an even longer time. David Hunter Tucker (1815-1871) was the son of Henry St. George Tucker, author, law professor, and president of the Virginia Supreme Court of Appeals. He was born in Winchester, June 18, 1815, and was sent to the University of Virginia for both his academic and medical courses. Subsequently he went to the University of Pennsylvania, receiving his M. D. in 1837. There followed two years' study in Paris, where his interest in obstetrics was aroused. Returning to Philadelphia he set up to practise, married Elizabeth, the second daughter of George M. Dallas (later Vice-President of the United States), and became one of the founders of the short-lived Franklin Medical College. His lectures as professor of obstetrics gained for him an enviable reputation and formed the basis for a published work entitled *Elements of the Principles and Practice of Midwifery,* which was favorably reviewed in the *American Journal of the Medical Sciences.*[121] Dr. Tucker's promising career in Philadelphia was terminated when he accepted a call to succeed John Cullen in the Medical College of Virginia. As professor of the theory and practice of medicine (1849-1869) and as dean (1853-56) he was a worthy successor. For some reason he made no contribution to the medical journals of his day, but he became a well-known consultant in Richmond and was one of those called in consultation in General Jackson's last illness. At his death, in 1871, an eloquent tribute was paid to his memory by the Richmond Academy of Medicine.[122]

The Reconstruction was a hard period for the College. The enrollment dropped alarmingly and did not rise again until 1882. In 1870, with a student body of twenty, the catalogue assured the public that the faculty was not dis-

[121] American Journal of the Medical Sciences, 1848, v. 15, p. 511. The book was published in Philadelphia in 1848.

[122] Transactions of the American Medical Association, 1872, v. 23, pp. 601-603. Emmet: Incidents of My Life, New York, 1911.

couraged by the "diminished number of classes since the war," as this was recognized as "one of the direct results of emancipation and the attendant impoverishment of the white population." Under such conditions it is easy to excuse the continuation of the short course, which had been cut from five to four months during the war. In 1867 it was lengthened to five months, with the promise that it would be extended to six "as soon as it shall become apparent that the schools of the country generally are prepared to unite in this desirable reform." It was extended in 1880 to nine months, with lectures reduced to not more than four a day, and with a two-year graded course. The long term was announced with enthusiasm in the catalogue as being a "new departure" which would remedy every defect in the old system of instruction. It apparently was too radical an improvement, for in 1881 the course was reduced to seven and a half, and in 1882 to six months.

In 1867 the faculty was increased from seven to eight, and physiology was added to the chair of medical jurisprudence, held by Levin S. Joynes, who thereafter taught both subjects. To the new chair of general pathology and pathological anatomy Edwin Samuel Gaillard (1827-1885) was called. A native of Charleston and a graduate of the Medical College of South Carolina, he had been a medical inspector in the Army of Northern Virginia and had lost an arm at Seven Pines. After the war he settled in Richmond, married as his second wife a daughter of Charles Bell Gibson, and in 1866 founded the *Richmond Medical Journal*. The next year he became professor in the medical school. His career in Richmond was short-lived, for in 1868 he became dean of the Kentucky Medical School, at the same time moving his journal to Louisville and changing the name to the *Richmond and Louisville Medical Journal*. In 1880 he moved to New York and founded *Gaillard's Medical Journal*.[188]

Gaillard was a keen though sympathetic critic of the faults of medical education in his adopted state and repeatedly took occasion to voice his opinions in the columns of his journal. Approving the action of the Medical College of Virginia in lengthening its winter course in 1867 to five months, he wrote: "As this is one of the Institutions which confers the degree of the Doctorate, after an attendance of two courses of lectures, delivered in eight months of a single year, any extension of the period of pupilage is important." He was glad to note the improved hospital advantages of the College, but observed that "requirements for graduation are insufficient, and those in regard to dissection are vague and indefinite. The requisites for matriculation are hospitably restricted and inviting." He saw clearly the one weakness of medical education at the

[188] Obituary, Virginia Medical Monthly, v. 11, p. 649.

University of Virginia: "The entire want of clinical advantages at this School, is to be deeply regretted." However, "Its Corps of teachers is very superior. . . . The facilities for dissection are unimpaired, and . . . the elementary basis in education is well established, before the superstructure is attempted."[184]

Gaillard was succeeded by Otis Frederic Manson, a man of bold and independent views, who held the chair of pathological anatomy from 1868 to 1876 and that of physiology and pathology from 1876 to 1883, when serious differences with other members of the faculty led to his resignation. Manson's professional life centered around his interest in malaria. He appears to have written upon few other subjects. The first in America to describe "puerperal malarial fever," he also defended "malarial pneumonia" as a clinical entity, entering a celebrated controversy on the subject with Professor W. T. Howard of Baltimore. He advocated the use of quinine sulphate in large doses in erysipelas, scarlet fever, croup, and rheumatism. His private library, made up largely of works dealing with malaria, is said to have numbered more than two thousand volumes. His published works consisted of articles, in Virginia journals, on quinine, endemic pneumonia, clinical thermometry, the endemic diseases of the Roanoke Valley, and remittent fever, and a *Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinine.*[185] At the time of his death he was engaged in writing a history of fevers from the earliest times. He deserves to be remembered for his original views, however radically the light of subsequent events may have altered their significance. He was born in Richmond, October 10, 1822, and graduated from the medical department of Hampden-Sidney College in 1840 at the early age of eighteen. A year later he married a daughter of Spotswood Burrell of North Carolina and set up in Granville, North Carolina, for practice. He became a member of the first board of medical examiners in North Carolina. As a surgeon in the Civil War he acceptably served his adopted state in his management of hospitals in Richmond for the North Carolina troops, a position to which he was early appointed by Governor Vance. After the war he settled in Richmond and acquired a large and remunerative practice. On his resignation from the College in 1883 he was made professor emeritus. As a charter member of the Medical Society of Virginia and of the Richmond Medical and Chirurgical Society and as editor of the *Virginia Clinical Record,* he exerted considerable influence on medical thought in Virginia. For a number of years he was president of the Richmond City Council. After the death of his first wife, by whom he had six children, he married Mrs.

[184] Richmond Medical Journal, 1866, v. 2, p. 73.
[185] Philadelphia, 1882.

Helen Gray Wattson. He died of apoplexy, February 1, 1888, and is buried in Richmond.[186]

In the reorganization of the College following the war there were several additions to the faculty. Hunter H. McGuire, fresh from an enviable military career, assumed the chair of surgery in 1865 and held it until the pressure of his own private practice led to his resignation in 1881. He was succeeded by John Syng Dorsey Cullen, whose military position in the Confederate army had been equally high and whose commanding presence continued to give prestige to the department of surgery till his death in 1893.[187]

The rearrangements of 1868 continued in the chair of obstetrics Robert T. Coleman (1830-1884), who since 1865 had taught both obstetrics and diseases of women and children. A native of Hanover County, a graduate in medicine of both the University of Virginia and Jefferson Medical College, he was one of the "ablest and most efficient teachers of obstetrics which this country has produced." For three years after graduation he continued in Philadelphia, serving so acceptably at the Blockley Hospital that shortly after his return to practise in Richmond in 1854 he was elected lecturer in clinical medicine in the Philadelphia institution. He declined the position. At the outbreak of the war he entered the Confederate military service as surgeon to the Twenty-first Virginia Regiment and rose rapidly to a high position in the medical department. He was surgeon-in-chief to the celebrated Stonewall Brigade. His professorship in the Medical College of Virginia began almost immediately after the close of the war and lasted until his death in 1884. His contributions to medical literature were few, dealing exclusively with his specialty. The tributes of his students and fellow practitioners were affecting, expressing not only their appreciation of his gifts as a teacher but their admiration for his big heart. His successor, Christopher Tompkins, served the college long and faithfully, first as professor of anatomy (1880-84), then as professor of obstetrics, and still later as dean.

In 1866 Samuel Logan succeeded Peticolas as professor of general and special anatomy but resigned a year later to become head of the department of surgery in the New Orleans School of Medicine. He was a South Carolinian, who had taught in the South Carolina Medical College and assisted in editing *Gedding's Surgery* before coming to Richmond. He was followed, in Richmond, by Francis Deane Cunningham, who held the chair until 1880. George

[186] Kelly and Burrage: Dictionary of American Medical Biography, p. 807. Satchwell: Memorial Sketch, Virginia Medical Monthly, v. 14, p. 984.

[187] Cullen had taught diseases of women and children since that department was detached from the chair of obstetrics (1868), its first appointee (Walter Coles) declining the honor.

Ben Johnston succeeded Tompkins in 1884, and Lewis C. Bosher held the professorship of anatomy from 1888 to 1896, both resigning to realize larger ambitions in the department of surgery.

In 1869 James B. McCaw was transferred from the department of chemistry and pharmacy to that of medicine, and Robert S. J. Peebles succeeded him in the former chair. Born in Petersburg in 1840, son of John F. Peebles, M. D., of estimable character and attainments, he was early left an orphan and sent to Philadelphia for his collegiate education. His medical course began under Joseph Carson, whose course of lectures at the University of Pennsylvania he attended from 1860 to 1861. On the outbreak of the war he returned to Petersburg and enlisted as a private in the Twelfth Virginia Regiment. Failing health forced him to resign and return to his studies. He graduated from the Medical College of Virginia in the class of 1862. Shortly afterwards he was appointed surgeon, C. S. A., and later, as assistant medical director of the army hospitals of Petersburg, he rendered valuable service to his state and country. Settling in Richmond after the war he made no attempt to practise medicine but devoted himself to teaching as a profession, first in the summer school and later as professor of chemistry and pharmacy in the College. As a member of the city board of health and as a frequent contributor to medical literature he had demonstrated considerable ability before his promising career was terminated in 1873 at the age of thirty-four by pulmonary tuberculosis.[128]

The next incumbent of the chair of chemistry and pharmacy was the inimitable William H. Taylor, who as author, satirist, and professor was long an admired and familiar figure in the College faculty.

The chair of materia medica and therapeutics, which John Spotswood Wellford took over from his father in 1868, was held by him until 1881 when he succeeded Cullen as professor of the diseases of women and children. Martin L. James (1829-1907), who followed him as professor of therapeutics, was moved in 1884, after a brief incumbency of three years, to fill a vacancy created by the resignation of James B. McCaw from the chair of medicine. As professor and dean James served the institution successfully until 1894. He is remembered chiefly for his early attempt to specialize in diseases of the chest and heart and for his original investigations concerning the physical signs of "heart clots." He was born in Goochland County, August 11, 1829, son of Martin and Elizabeth Thompson James, and was educated at Richmond College and the University of Virginia. He graduated in medicine from Jefferson Medical College

[128] Obituary, Virginia Clinical Record, 1873, v. 3, p. 40.

in 1852 and practised in Goochland before moving to Richmond in 1867. His wife was Julia Jesse, of Epping Forest, Lancaster County.[139]

John N. Upshur taught therapeutics from 1884 to 1894, and practice of medicine from 1894 to 1899. His father was Dr. George L. Upshur of Norfolk, one of the martyrs in the yellow fever epidemic of 1855. He was a man of energy, with strong convictions and a ready pen, and a great champion of the ethics of his profession.

The expansion of the course was noticeable by 1869, when a dispensary for diseases of the eye and ear was set up in connection with the College hospital, and clinical instruction under Professor Cunningham was made to include familiarity with the ophthalmoscope and the otoscope. In 1871, under Dr. J. S. D. Cullen, the diseases of children began to be stressed, and the catalogue pointed out that abundant opportunities to see sick children were to be had in the wards of the hospital. In 1880 a post-mortem clinic in charge of Charles M. Shields was announced, and clinical laboratory work was offered by William H. Taylor. In 1881 Joseph A. White's eye and ear clinic succeeded Dr. Cunningham's. In 1883 Charles M. Shields was placed over the eye, ear, and throat department, though he did not become professor until 1893. The catalogue for 1883 assures the students that "in these now indispensable branches a complete course of didactic and clinical instruction will be given." Soon an opportunity for instruction in other special branches of medicine was offered. The dispensary had a section on diseases of the nervous system and skin as early as 1883, and Edward C. Smith was in charge of this clinic in 1886. Clinical lectures on the nervous system were delivered after 1893 by Richard H. Cunningham, Henry H. Levy, and J. P. Massie. F. H. Beadles became instructor in skin diseases in 1896, assisted by William P. Matthews, who was a clinical lecturer in these diseases. Henry H. Levy, the professor of physiology and pathology from 1883 to 1893, and of physiology alone until 1899, was admired for his integrity, kindness, and good sense.

The two decades following the war were far from tranquil. Continued criticism was leveled at the College from without, and growing dissension within seriously weakened the faculty. The resignations of McGuire, Cunningham, Manson, and McCaw followed one another in quick succession. In the fall of 1882 the affairs of the College took an astonishing turn. Without warning, on September 24, Governor Cameron intervened and appointed an entirely new

[139] Kelly and Burrage: American Medical Biographies, p. 607.

board of visitors.[140] Acting under the Governor's instructions they assembled at the Medical College to organize and inspect the books. They had not calculated on the foresight of Drs. J. B. McCaw and J. S. Wellford of the faculty, who were on the spot with enough police to prevent their entrance to the building. A rash attempt on the part of Mr. W. E. Sims resulted in his arrest and a trip to the station house at the Old Market. Not to be outdone, the new board met in the yard and organized with Lieutenant-Governor Lewis as president and Dr. Lewis Wheat as secretary. They met again on September 30 with the intention of ejecting the old faculty, but again failed, and on October 2 the College opened as usual. Another attempt to take charge of the College on January 5 was also a failure, and the matter was then submitted to the Court of Appeals, which on April 30, 1883 handed down a unanimous opinion to the effect that the Governor had acted illegally. And so the matter was brought to a close.

Criticism from without at this time was voiced chiefly by the editor of the *Virginia Medical Monthly,* Landon B. Edwards. He took pleasure in reproducing the editorial comment of a New York medical journal on a letter from a disgruntled former student in the College, who declared that the medical students did not go into the hospital wards at all, a sort of clinic being arranged for them from dispensary and walking patients. "After two years, no more, of questionable study, the young men leave furnished with doctors' diplomas." "The education thus received," commented the Northern journal, "is so imperfect that the establishment of post-graduate colleges is a legitimate outcome of the demand by conscientious practitioners for more thorough clinical instruction. The main charges made against the Richmond college are those of slovenly teaching, short course, and incomplete clinical instruction."[141] In a bitter editorial in 1884, Dr. Edwards asserted "the College has of late years degenerated . . . has become simply *notorious* in professional esteem." He claimed a closed corporation existed between faculty and board of visitors, enabling them "to elect or reject professors and lecturers as they please, and go to Societies to eject officers who may not have 'bowed the knee' to them." The existence of four vacancies on the faculty at the present time, he suggested,

[140] Members of the old board were: James Lyons, president; Bishop F. M. Whittle, G. M. Nicholson, Dr. Lewis Wheat, J. Alfred Jones, Dr. W. H. Dennis, Dr. W. O. Owens, Dr. S. C. Gleaves, J. H. Dooley, Dr. J. W. Lassiter, J. L. Mayre, Dr. W. B. Weisiger, Dr. J. L. M. Curry, Dr. J. M. D. Atkinson, Judge W. W. Crump, Col. J. B. Young, Dr. Armistead Wellford, and Dr. I. H. White. The new board was to consist of Lieutenant-Governor J. F. Lewis, W. E. Craig, L. E. Harvie, Dr. W. J. Cheatham, Dr. J. B. Webb, W. A. Jamison, J. T. Dyer, R. T. Hubard, C. M. Louthan, Dr. W. E. Harwood, W. S. Dashiell, N. B. Meade, W. E. Sims, Dr. Lewis Wheat, N. W. Gisler, H. J. Wade, Meade Haskins, C. M. Webber, J. P. Gilham, and Dr. Z. B. Herndon. Christian, W. A.: Richmond: Her Past and Present, pp. 378-379.

[141] Virginia Medical Monthly, 1884-'85, v. 10, p. 696.

gave an excellent opportunity to restore the faculty to its former high level. "Do not confine selections to doctors of this city, but elect professors from any community, to make the College again an honor. . . ." He pointed out that, in an effort to increase the student body, the faculty had recently offered free tuition to 140 Virginians selected from congressional districts by members of the legislature. He stated that out of eighty matriculates in the last session not over ten had paid the full tuition. The continuation of such a practice not only threatened to admit much unprepared material but was likely to close the doors of the medical department of the University of Virginia.[143]

Taking the opposite side, although stoutly denying the rumor that it was "the organ of the Medical College of Virginia," the *Atlantic Journal of Medicine* protested against "the interference of any political power, now or at any other time, with this or any other educational institution."[144] Dr. Edwards' suggestion of bringing in new material was not followed by the board of visitors. The four new professors chosen in June 1884 were already members of either the regular or the adjunct faculty.[144]

The next controversy into which the College was drawn was provoked in 1888 by an editorial in the *Journal of the American Medical Association,* criticizing the faculty for low standards and for opposition to the state medical examining board. Dean J. S. Dorsey Cullen's reply was printed in full, with the *Journal's* answer that "If Dr. Cullen wishes to know why more was said of the Medical College of Virginia, in our editorial articles, than of other colleges doing as bad or worse work, we may say that it was because the faculty officially endorsed the establishment of the State Board of Examiners, and afterwards individually opposed the Board before the Legislature."[145] These charges were denied on behalf of the faculty by both Dr. Cullen and Dr. Upshur.

1893 was a critical time in the history of the College. In this year a rival institution, the University College of Medicine, entered the field, and for the next two decades there was a visible acceleration of effort on the part of the old school. Sweeping changes were instituted, laboratory instruction was emphasized, and in 1894 for the first time a three-year graded course was announced and the necessity for adequate preliminary education was stressed. The thesis at graduation had been abolished in 1888. In 1895 admissions were limited to high-school or college graduates. In 1899 the course was extended

[143] Virginia Medical Monthly, 1885-'86, v. 11, p. 52.
[144] Atlantic Journal of Medicine, v. 1, pp. 70-72. Edited by Drs. R. B. Stover and Henry G. Houston, of Richmond.
[144] Virginia Medical Monthly, 1885-'86, v. 11, p. 180. They were Drs. James, Tompkins, Upshur, and Johnston.
[145] Virginia Medical Monthly, 1889-'90, v. 15, p. 778.

to four years, and for the first time the requirements for graduation were the most stringent in the state.

Fees had been steadily reduced. From $135 in 1887 they were lowered to $90 in 1888, and in 1899 to the ridiculous level of $65, so keen was competition.

In 1897, in imitation of its rival, the College was divided into three departments—medicine, dentistry, and pharmacy. The school of dentistry was entirely new, the faculty consisting of Henry C. Jones, D. D. S., professor of operative, prosthetic, and clinical dentistry; Thomas R. Marshall, M. D., D. D. S., principles of dentistry, oral surgery, and special anatomy of the head; William H. Taylor, M. D., chemistry and metallurgy; Henry H. Levy, M. D., physiology and hygiene; William P. Matthews, M. D., anatomy; E. C. Levy, M. D., histology, pathology, and bacteriology; Robert F. Williams, M. D., materia medica and therapeutics.[146] The school of pharmacy was also new, though this subject had been taught in the College from the beginning and a separate diploma given as early as 1880. The faculty consisted of Frank M. Reade, J. M. Whitfield, William H. Taylor, Robert F. Williams and F. H. Beadles.

Notable also were the changes instituted in the hospital of the College. In 1895 its name was changed to the Old Dominion Hospital and a school of nursing under the superior direction of Miss Sadie Cabaniss inaugurated.

To keep pace with the rival school enormous expansion of the medical faculty became necessary. In 1882 there were only eight professors and seven adjuncts, and by 1896 but three additions to the regular faculty had been made. Before the end of the century, however, the College compared favorably in number of professors with the new school which had opened with a faculty of forty. On the death of J. S. D. Cullen, George Ben Johnston, who had been professor of anatomy, was called to the chair of surgery and thereafter became the dominant figure in the faculty. A man of fine presence, great ambition, and unusual surgical talent, he ably guided the College through the succeeding stormy years. In 1893 the department of surgery was divided into didactic and clinical surgery, taught by Johnston himself, and genito-urinary surgery, taught by Lewis C. Bosher. With various shifts in titles these two men continued to do most of the teaching in the department of surgery.

A department of orthopedic surgery was organized in 1893 with James P. Roy as lecturer. Robert F. Williams succeeded him in 1896, and in 1899

[146] All but Jones and Marshall were on the faculty of the school of medicine also, and Marshall was on the adjunct faculty.

William P. Matthews became the first professor of this subject. Minor surgery was taught by M. L. Levy of the adjunct faculty in 1880. J. Page Massie entered the department of obstetrics, succeeding Dr. Tompkins, in 1897. In 1893 J. W. Long came to Richmond from North Carolina to take Dr. Wellford's place as professor of diseases of women and children. Following one of the misunderstandings in the faculty, so common at this period, he resigned in 1897, and the chair was again split so as to separate off a department of children with Charles A. Blanton as professor. Dr. Johnston taught gynecology as well as surgery. John N. Upshur was succeeded in the department of medicine in 1899 by Henry H. Levy, who had taught physiology and pathology from 1883 to 1893 and physiology alone from 1893 to 1899. Robert F. Williams succeeded to the chair of materia medica and therapeutics in 1897 when Charles A. Blanton, who had held the position since 1894, was transferred to the new chair of pediatrics.

Changes in other departments during this period were radical. William P. Matthews taught anatomy after 1896. Bacteriology was combined with general pathology in 1893, with J. Page Massie as professor. He was succeeded in 1897 by E. C. Levy, and histology was formally added to the chair at this time. Charles M. Hazen taught physiology in 1899. The gifted and lamented John P. Davidson became professor of diseases of the eye, ear, nose, and throat in 1898.

An astonishing increase in matriculates in medicine in Virginia occurred immediately after the organization of the new school in Richmond. For years the attendance in the old school had fluctuated between forty and seventy. A marked upward trend appeared in 1894, and in 1895 there were 139 matriculates. In 1894 there were 180 in the new school and 160 in the medical department of the University of Virginia. In a single year the total number of medical students in Virginia colleges increased from 225 to 450.

IX. THE UNIVERSITY COLLEGE OF MEDICINE

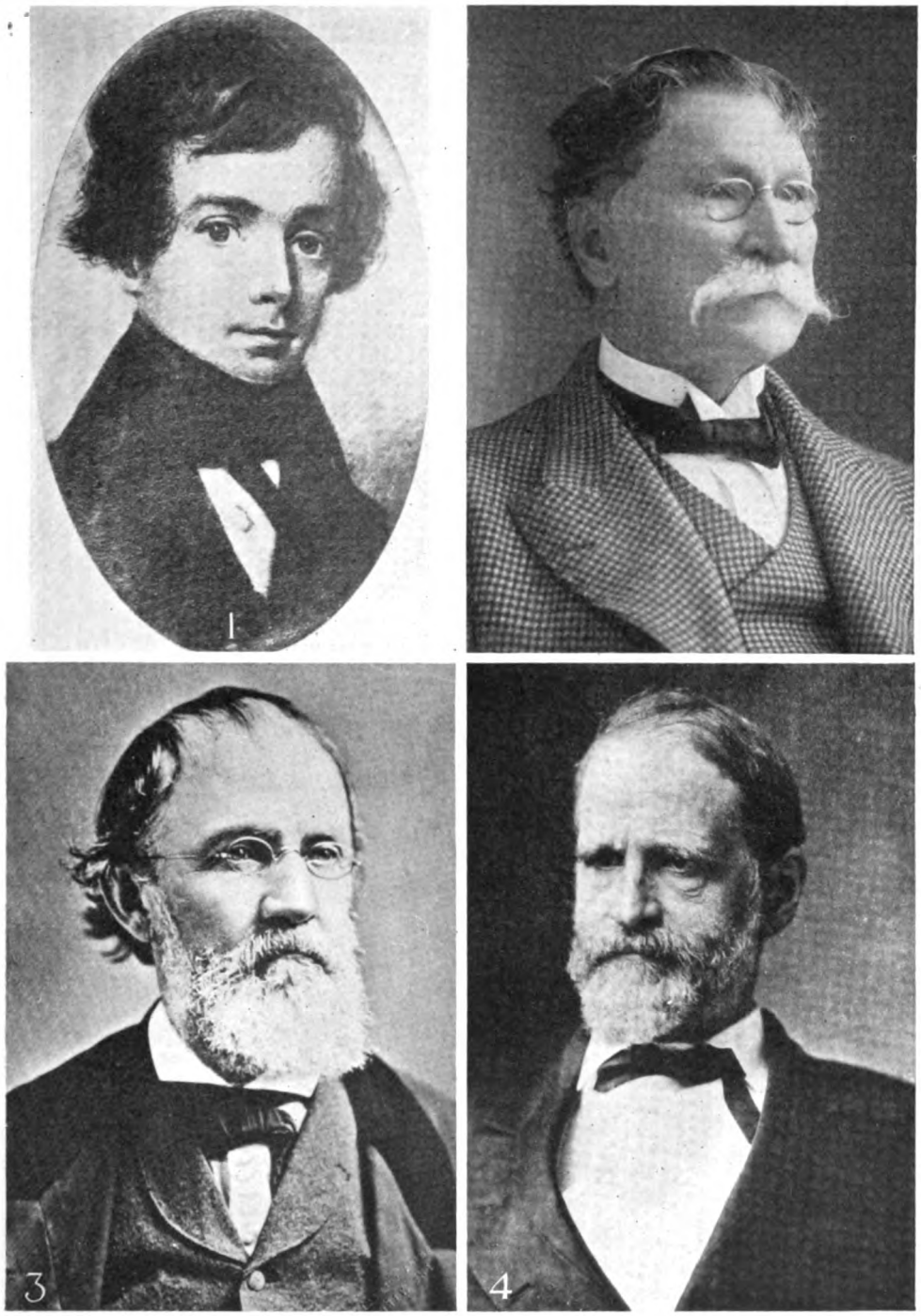
In June 1893 a new medical college was chartered in Richmond. At first called the College of Physicians and Surgeons, in a few months the name was changed to the University College of Medicine. The first session began October 3, 1893, with 125 matriculates, and on April 5, 1894 Dr. Hunter McGuire, the president, conferred degrees upon ten students. It was clearly a competitive institution, with a faculty enjoying proprietary rights similar to those long monopolized by the old school. There were possibilities for good and evil in

such a situation. Competition brought with it some tightening of the traces in the old school, improvement of the curriculum, lengthening of the course, reorganization of the hospital, and the creation of a school of nursing. But with it also came the intensest sort of antagonism and rivalry, and a competition for students that went to any extreme. The enormous increase of medical students in Richmond, which at once followed, proved to be an effectual stop to the Northern migrations of the past.

The new institution with its hospital—the Richmond City Hospital—was first planned for a site on West Broad Street, opposite the Lee Monument. Difficulties in regard to water supply caused a change of plans, and the college and hospital were established on East Clay Street, occupying two large residences on the corners of Eleventh and Twelfth Streets. The war-time residence of Vice-President Alexander Stephens[147] was converted into the college building, and the larger building to the west became the hospital, and was called the Virginia Hospital. Considerable improvement was made in the teaching building in 1896, so that the college could now boast of "fifteen separate apartments, all especially designed and equipped for their specific purposes." This building stood until the fire of January 1910. On its site the present well-equipped building was constructed.

The new medical school got off to a good start by at once subdividing its organization into departments of medicine, dentistry, and pharmacy with separate faculties and carefully worked out curricula. The course in each school was graded. In medicine it was planned to extend over three years of six teaching months each. In dentistry there were three sessions of eight months and in pharmacy two. No pains were spared in the organization of the medical faculty. It was headed by the outstanding surgeon of the state, Hunter McGuire, who besides holding the chair of clinical surgery was the president of both the college and its board of directors. This faculty for the seven years before 1900 consisted of Hunter McGuire, professor of clinical surgery (1893-); Hugh M. Taylor, professor of practice of surgery (1893-); Stuart McGuire, professor of the principles of surgery (1893-); Landon B. Edwards, professor of practice of medicine (1893-); Thomas J. Moore, professor of clinical medicine (1893-1898), chairman of the faculty (1894-1895); Edward McGuire, professor of diseases of the nervous system (1893-1894), associate professor of diseases of women (1893-1894) and professor of diseases of women

[147] The lot at Twelfth and Clay was the site of the home of John Ambler. His house was replaced by one built by Mrs. Elvira A. Bruce, about 1850. Vice-President Stephens lived there during the Civil War. It was later owned by Robert A. Lancaster, who sold it to the University College of Medicine.



TEACHERS IN THE MEDICAL COLLEGE OF VIRGINIA
1. Robert Munford. 2. James B. McCaw. 3. David H. Tucker. 4. John S. Wellford.

MEDICAL SCHOOLS IN RICHMOND: 1. The Union Hotel, Nineteenth and Main Streets (Medical Department of Hampden-Sidney College). 2. The Egyptian Building (Medical College of Virginia). 3. McGuire Hall (University College of Medicine).

(1894-); George Ross, professor of obstetrics (1893-1896) and emeritus professor of obstetrics (1896-); Jacob Michaux, professor of obstetrics (1896-), professor of materia medica and therapeutics (1893-1897) and clinical professor of diseases of the rectum (1893-1896); Isaiah H. White, professor of diseases of women (1893-1894); Paulus A. Irving, professor of diseases of children (1893-); Lewis Wheat, professor of diseases of genito-urinary organs and syphilis (1893-); Joseph A. White, professor of diseases of the eye (1893-) and associate professor of diseases of ear, throat, and nose (1893-); John Dunn, professor of diseases of ear, throat, and nose (1893-) and associate professor of diseases of the eye (1893-); Benjamin Harrison, professor of materia medica and therapeutics (1897-); William S. Gordon, professor of physiology (1893-); J. Allison Hodges, professor of anatomy (1893-1896), clinical professor of nervous and mental diseases (1894-1896) and professor of nervous and mental diseases (1896-); James W. Henson, professor of anatomy (1896-) and demonstrator of orthopedic surgery (1899-); Moses D. Hoge, professor of histology, pathology, and urinology (1893-) and curator of museum (1895-); Charles H. Chalkley, professor of chemistry, toxicology, and medical jurisprudence (1893-1897); William R. Jones, acting professor of chemistry and toxicology (1897-); W. T. Oppenhimer, professor of hygiene and state medicine (1893-1894), professor of hygiene and preventive medicine (1894-1897), and clinical professor of skin diseases (1893-1897).

When contrasted with the small faculty then in charge of the Medical College of Virginia, this was a formidable and elaborate array of teaching talent. No wonder it was immediately attractive to students. The requirement for admission was a high-school education. Lacking this an applicant might be admitted after an examination before the faculty in English, mathematics and Latin. The fees, which were originally $100, with an added $30 for graduation, were reduced to $85 in 1898 and the next year to a still lower level.

Clinical facilities were emphasized from the first. The adjacent Virginia Hospital, several times enlarged and improved, by 1896 contained 125 beds in four wards devoted to medicine, surgery, obstetrics, and gynecology, with a resident staff of two physicians and a "large corps of trained nurses." The City Almshouse Hospital and the Richmond, Eye, Ear, and Throat Infirmary were available for the instruction of students, and these with the College Dispensary cared for more than ten thousand patients annually. The training school for nurses was in operation certainly by the session of 1895-1896, possibly earlier.

Following the first winter session the college instituted a supplementary course of instruction in the summer lasting eight weeks under the supervision of the faculty and adjuncts, designed to give additional instruction to beginners in medicine and to assist those wishing to review their studies, take state board examinations, engage in graduate work, or specialize. About the same time in the college announcement students were "earnestly advised to prolong their studies during the fourth year, which is offered free of expense, in order that they may derive additional benefit from an extended Clinical experience, and in furtherance of this object, a special curriculum has been arranged." In 1894 the term was extended to seven months.

How the University College of Medicine rapidly acquired preëminence and continued to challenge the best in the older Medical College of Virginia is a story that properly belongs to the Twentieth Century. The amalgamation of the two schools was inevitable. Exhausted treasuries finally accomplished what the animosities of the two faculties had long prevented. The decision of George Ben Johnston and Stuart McGuire to bring the two boards together to agree upon terms and appoint a new faculty was a happy solution of the difficulty, and a union was effected in 1913.

CHAPTER III

ANATOMY AND GRAVE-ROBBING

THE study of anatomy everywhere went on crutches as long as human dissection was interdicted. Only in comparatively recent times has the ban been lifted—in continental Europe first, in Great Britain next,[1] and in this country last. Massachusetts was the first state to permit human dissection. Virginia did not recognize the need for legal provisions governing the supply of anatomical material until 1884. In that year an anatomy act was passed which brought to an end the strange spectacle of state institutions, operating under legalized charters, offering and advertising courses in anatomy in which the dissection of the human cadaver was a necessity, while the method by which these cadavers were secured was a felony at law. Before the passage of this act respectable teachers of anatomy were driven to the undignified and illegal practice of encouraging and rewarding grave-robbing as the sole means of supplying the dissecting room with the material from which the student of medicine could learn the structure of the body.

There were several sources of anatomical material in Virginia before human dissection was legalized. Unscrupulous undertakers were said to have buried many weighted coffins, in the meantime disposing of the bodies of the deceased to individuals or to agents of the colleges. The bodies of a few executed criminals also found their way into the dissecting rooms. A Richmond paper declared that from the convict cemetery outside the walls of the state penitentiary "the resurrectionists have obtained many bodies for use here or for sale to the University of Virginia and other medical institutions, which have for several years past been supplied from this city."[2] The most important source, however, was the Potter's Field, although the annual contribution of this cemetery to the dissecting halls was not large. A student of medicine in the Medical College of Virginia in 1879 recalls that there were only five or six cadavers available each year for dissection.[3] The bodies—mostly negroes—were preserved not by refrigeration but in vats and by arterial injection—an

[1] 1832.

[2] Richmond Daily Dispatch, January 7, 1880.

[3] The catalogues of the Medical College of Virginia repeatedly advertised the abundance of their anatomical material. In 1839 there was "a most abundant supply of subjects for dissections and surgical operations on the dead body." In 1854, "The supply of subjects has always been abundant" and furnished at slight expense. In 1863, in the midst of the Civil War, the student was assured that "no fears need be entertained of a deficiency of material for dissection."

unsatisfactory method, which meant that even these few subjects had to be dissected speedily before decomposition made the task too difficult for even a seasoned medical student.

The principal figure in the oft-repeated spectacle of grave-robbing was the college diener—in the South the negro janitor—whose exploits, real and imagined, made of him a character no longer existent in medical institutions. Armed with pick, spade, and lantern, the grave-digger fared forth alone or accompanied by a few adventurous medical students. A dark night, a sack, a cart, and a shallow grave were all he needed to "resurrect" the recently interred body.[4]

"The body snatchers! they have come
And made a snatch at me;
It's very hard them kind of men
Won't let a body be!

"Don't go to weep upon my grave,
And think that there I be;
They haven't left an atom there
Of my anatomy!"[5]

In Richmond the deserted hillside leading down to Bacon's Quarter Branch back of the poorhouse was the old Potter's Field until the city enclosed certain ground adjacent to Oakwood Cemetery, placed it under the supervision of a keeper, and dedicated it for the burial of paupers. This latter was the Potter's Field in the eighties when old Billy, veteran sack-em-up man, and his promising assistant, Chris Baker, were in their heyday. These two servitors of the Medical College were viewed with a wholesome respect in the college and particularly in the colored community. It was whispered among the negroes living in the vicinity that it was unsafe to traverse the near-by streets after dark. Stories of the janitors stealthily creeping up behind stragglers on the street and throwing bags over their heads to smother their outcries as they were dragged away were common in the neighborhood. The unusual aspect of the Egyptian Building and the knowledge that here dead bodies were kept heightened the feeling of dread.

Of the many stories told of body-snatching the most authentic has to do with an occurrence in 1884, when the newly appointed keeper at Oakwood took steps to protect the graves in the territory in which he presided. Enlisting the

[4]Even after the passage of the anatomy act, the number of cadavers available was not large. The total number of bodies supplied the Medical College of Virginia and the University of Virginia by the anatomical board between July 1887 and January 1888 was thirty.

[5]Lossing: Pictorial Field Book of the Revolution, p. 35.

aid of a policeman named Angel, he laid a trap for the lawbreakers. On a certain dark morning about four o'clock Chris and Billy, accompanied by three students, set out in a wagon for the cemetery. A lighted lantern marked the newly-made grave. Disinterment was hardly under way before a rush of footsteps was heard, and the whole party took to its heels. The trap was well laid. All were captured except one, a fleet-footed citizen of Louisa County. In police court the next morning the culprits were fined and sentenced to imprisonment in the city jail. Here the two students and the two janitors, fed and provided for by sympathizers, made the best of their hard luck until Governor Cameron pardoned them. At the next session of the legislature the anatomy act was written into the Virginia statutes.

The same thing went on in other college communities—Charlottesville, Prince Edward, and Winchester—and in one the destruction of the college was directly the outcome of an unhappy anatomical dissection. At the time of John Brown's raid the whole student body of the Winchester Medical College journeyed to Harper's Ferry to see for themselves what was happening. Leaving the train before it reached the station they encountered a dead man stretched upon the banks of the Shenandoah. Quick to take advantage of such a fortuitous circumstance, they placed their find in a box and shipped it back to the college. When the box was opened, to their astonishment the clothes and papers upon the body revealed that it was none other than Owen Brown, son of the Emancipator. A dried preparation was made of it, and it joined the other specimens used for demonstration. The anatomical department received further additions on December 16, 1859. On this day two negroes, Shields and Copeland, who had been captured in the raid at Harper's Ferry, were hung at Charles Town, Virginia. That same night industrious medical students exhumed the bodies and brought them back to the college with the ropes still about their necks. In some way it came to the knowledge of General Banks, when the Federal army entered Winchester in March 1862, that the body of John Brown's son was in the college building and that it had been used for teaching purposes. Federal soldiers were dispatched at once to recover the body, which was sent North, and by order of the General the college buildings were burned to the ground.

The invasion of private burying grounds and the use for anatomical purposes of the bodies of those who were known to have friends and relatives rarely occurred in Virginia, though such was not the case elsewhere. In Scotland the strong iron bars still guarding the tombs bear eloquent testimony to the fears of relatives for their dead. These fears were not confined to the old country. William Shippen, an early Philadelphia anatomist, on several occasions was

beset by mobs and his life endangered because of the distrust in which he was held by the populace. In New York City in 1788 an anatomy riot "in consequence of a suspicion that the physicians of the city had robbed the graveyards to procure subjects for dissection" was participated in by a large mob, which spread consternation for two days and was not quelled until a volley from the militia killed seven of the rioters and wounded seven or eight others.[6]

There is no record of any such mob violence in Virginia, but in 1880 there was considerable excitement in Richmond, accompanied by newspaper publicity, concerning the activities of the resurrectionists in Oakwood Cemetery. As early as 1878 Surgeon Conrad, of the colored insane asylum, had complained to Keeper W. L. Smith of Oakwood that the body of a patient of his had been taken from the cemetery and had later been identified by a student in the dissecting room of the Medical College of Virginia. In 1879 Smith was approached by a surgeon of Richmond (said to be the professor of anatomy at the college) for the purpose of gaining his connivance at body-stealing. He refused these overtures and reported them to the City Council, at the same time asking for police protection for the cemetery. In December 1879 the report got out that already forty graves had been robbed. It was said that many of the bodies, encased in kerosene oil barrels, had been shipped out of the city over the Chesapeake and Ohio Railroad and that others had found their way into the Medical College of Virginia. The *Virginia Medical Monthly's* January number regretted editorially the "exaggerated reports" of body-snatching in Richmond and the public discussion of it, assuring its readers that "the utmost circumspection has been used in selecting those bodies whose dissection cannot give grief to the living."[7] But the rifled graves were mute witnesses to the depredation. They seemed to show that a number of people were involved in the business. A small hole was sunk at the head of each, the coffin beneath broken open, hooks inserted, and the body drawn up through the hole. It was then dragged over the ground, through the fence and across Stony Run Creek, where carts were waiting to receive it. The trails could easily be seen. In the midst of the excitement the City Council initiated an investigation, and the superintendent of the cemetery was removed. There was some evidence that he was made the scapegoat and that the Council's committee on cemeteries was the real culprit. The grand jury took up the matter and, though no convictions followed, grave-robbing for a while lost something of its appeal.[8]

[6] Thacher: American Medical Biography, v. 1, p. 52.
[7] Virginia Medical Monthly, 1879-'80, v. 6, p. 832.
[8] Richmond Daily Dispatch, 1880, January 6, 7, 8, 10, 12; February 3, 6.

Bad as was the work of the resurrectionists in Virginia, the state has escaped some of the more hideous crimes which have sometimes been associated with grave-robbing. There have fortunately been no counterparts in Virginia of the Westport murderers in Scotland[9] or of the Baltimore "Burking" case, or of the crime in Ohio where a negro resurrectionist by the name of Ingalls murdered an entire colored family and sold their bodies to the Ohio Medical College in Cincinnati.[10]

The long-awaited action by the Virginia Assembly "to promote Medical Science and to protect Graves and Cemeteries from desecration within the commonwealth of Virginia" was approved on January 28, 1884.[11] It provided that professors of anatomy and surgery as well as demonstrators of anatomy in the schools and colleges of the commonwealth should constitute an anatomical board "for the distribution and delivery of dead human bodies." Officers of municipalities, almshouses, and prisons charged with the responsibility of burying unclaimed dead bodies were required to deliver them to this board to be used "within this state, for the advancement of medical science." The board, after giving the schools and colleges preferential consideration, might within its discretion supply bodies for dissection to certain specified physicians and surgeons. A bond of $1,000 was required of those receiving such bodies that they would be used only for the advancement of medical science within the state. A fine was fixed for selling or buying bodies or conveying them outside the state, and grave-robbing was made a felony punishable with from five to ten years in prison.

In reviewing the early difficulties confronting the profession in its effort to secure anatomical material, it is interesting to recall the sensational story of Dr. Alexander Tardy and his three desperate companions. Tardy, a Frenchman and a pirate, was buried on the Virginia shore "at high water mark with his face downward" in the summer of 1827. Boasting a career in which he had committed more murders than any other man alive and known to have fiendishly poisoned the crews of two coast-bound ships (one of which was bound from New York to Richmond), with a prison record in several states, he embarked on his last bloody venture in the spring of 1827 in the brig *Crawford* from Matanzas, Cuba. Again he attempted to poison all on board, but failed. Undaunted he loosed his three Spanish conspirators—Barbeto, Pepe, and Couro

[9] In 1829 Burke and Hare, of Edinburgh, systematically murdered the occupants of a certain boarding house and sold their bodies for dissection. Discovered, they were convicted and executed, and their own bodies now form a part of the Anatomical Museum of Edinburgh.

[10] Virginia Medical Monthly, 1884-'85, v. 11, p. 61.

[11] Acts of Assembly, session 1883-'84, p. 61.

—who with stiletto and pistol soon accomplished what his poison had failed to do. The mate was spared to navigate the ship to a German port, where the conspirators planned to dispose of the valuable cargo. Untoward winds defeated that purpose and drove the ship into the Virginia capes. How the mate escaped, how Dr. Tardy cut his own throat, how the three Spanish villains fled, were caught, hooded, and hung in Richmond is all recorded in the newspapers of the day. They must have suspected the purpose to which their bodies would be put, for their dying request was that they might remain undisturbed in their graves. They had hung on the gallows less than an hour when the seven thousand spectators saw the bodies removed to be buried in one grave. However, they were "soon disinterred and removed to the Armory, where Dr. Cullen and other medical gentlemen attempted galvanic experiments upon one or more of them." "We understand," continued the newspaper account, "these experiments were unsuccessful in consequence of the length of time that had elapsed after their execution."[12] The supposition that science made further use of their bodies is supported by a rumor published in the *National Intelligencer* that a certain "medical gentleman" of Richmond had sought and obtained permission from the governor to use the bodies for dissection.

[12] Richmond Enquirer, 1827, July 20, 24; August 7, 21, 31.

CHAPTER IV

MEDICAL SOCIETIES

MEDICAL societies trace their origin to Italy, where in 1560 the earliest scientific body in Europe was founded. It was more than two hundred years before the first steps toward organization were taken in America. Here the movement began in the large cities of the North, and in the North, also, the first state medical societies had their inception. With the exception of that in South Carolina (1789), there were no medical societies in the South before 1800. Virginia was particularly slow in recognizing the need for such associations, and it was the second decade of the Nineteenth Century before any effort was made in this direction. A genuine attempt to organize the profession on a state-wide basis was made in 1852, but it was 1870 before a state-wide society in any sense worthy the name came into being.

I. THE MEDICAL SOCIETY OF VIRGINIA

Seventeen physicians of Richmond and Manchester met on December 15, 1820 and formed themselves into a society "to be styled the Medical Society of Virginia." The preamble of the constitution, adopted the January following, stated: "Considering that the science of medicine occupies a distinguished rank in the circle of the liberal arts and sciences, and that its advancement is intimately connected with the happiness and prosperity of every well-regulated society: that the good people of this commonwealth have heretofore suffered great inconvenience and injury from an almost exclusive dependence on foreign institutions for instruction in the principles of this essential branch of knowledge: that the character and best interests of the state require that the evils of such dependence should, as far as possible, be removed, by the introduction of institutions of our own: and that an association having in view this object, long so highly prized and so anxiously expected by its liberal minded inhabitants, is now deemed practicable: a number of the members of the medical profession have formed themselves into a society. . . ."[1]

The organization meant business, for it adopted a resolution "that no person holding in part or whole any patent medicines, or remedies for diseases, shall

[1] Stethoscope, 1854, v. 4, pp. 528-534.

be eligible to a seat in this society; and any member who may hereafter become interested directly or indirectly, in any such patent, shall thereby absolutely forfeit his seat, and the word 'expelled' written opposite his name in the record book."[2]

At this organization meeting, January 1821, the Society elected its members and unanimously chose the venerable James McClurg its first president. Due to the infirmities of age the old man was unable to take part in the deliberations of the Society, and the vice-president, James Henderson, presided. Dr. McClurg was reëlected president in December 1821, and William Foushee, Revolutionary figure and first mayor of Richmond, succeeded to the office in 1822. He was followed two years later by James Henderson, a cultured Scotchman of inquiring mind, who had settled in Amelia County in 1789 and moved to Manchester in 1804. There he enjoyed a large and lucrative practice until his death in 1829. Papers read at the Society's meetings during these early years included: *Dissertation on Chronic Peritonitis; Thoughts on Puerperal Convulsions, Showing the Value of Ergot and Blood Letting; Essay on the Qualifications and Duties of a Physician; Treatise on the Temperaments;* and *Case of Hepatitis.*[3]

Four years after its organization an act incorporating the Society was passed (January 2, 1824):

"Whereas it has been represented to the general assembly, that sundry citizens hereinafter named, have for several years associated themselves as a society, with a view to the advancement of medical knowledge throughout the state of Virginia, and that the accomplishment thereof would be greatly facilitated, and their labors rendered more extensively useful, if they were vested with some of the attributes of a corporate body:

"1. Be it therefore enacted by the General Assembly, that William Foushee, senior, George Cabell, George Watson, James Henderson, John Hayes, Micajah Clark, Thomas Nelson, William A. Patterson [Patteson], James Blair, William H. Hening, James Worrall, John Adams, Lewis W. Chamberlayne, Robert H. Cabell, R. A. Carrington, John Dove, Branch T. Archer, William Tazewell, Nathaniel Nelson, Edward H. Carmichael, R. L. Bohannan, Philip Augustus Klepstine, and William R. McCaw, as well as others who may be hereafter admitted to membership with them, be a body corporate and politic, by the name of the 'Medical Society of Virginia.' "[4]

[2] Stethoscope, 1854, v. 4, pp. 528-534.
[3] Virginia Medical Journal, 1857, v. 8, p. 85. These papers, with an account of the origin of the society and its charter, were published in the American Medical Recorder, 1826, v. 10, pp. 121, 269.
[4] Acts of Assembly, 1823-'24, p. 77.

In November of this same year the Society held its last meeting. The records of the Society at the time give no clue to the cause of its dissolution, but it was asserted later that the "sudden and unexpected though temporary demise of the society . . . must be found in the apathy and indifference which most unaccountably palsied the exertions of the profession."

Seventeen years later (December 27, 1841) the Society was revived at a meeting held in the office of Thomas Nelson. New members were chosen, the old constitution readopted, and officers elected. Robert William Haxall was made president and the following year was reëlected.

Dr. Haxall (1802-1872) was a native of Petersburg. His education was begun at Yale College and continued, after preliminary study under his kinsman, Dr. Robert Barton of Winchester, in the medical departments of the Universities of Pennsylvania and Maryland. From the latter he took his degree in 1826 and after two years' clinical experience returned to Richmond to practise. In 1832 he went to New York City to study the epidemics of cholera raging there and two years later sailed to Europe, seeking further advantages in the schools and hospitals of France and England. In 1836 he returned to Richmond and until his death was one of her outstanding physicians. He was a frequent contributor to contemporary medical literature and twice received the Boylston Prize, with essays on *Fistula Lachrymalis* and the *External Means of Exploring the Internal Organs*.[5]

Frederick Marx was elected president of the Society in 1843. He was succeeded by Thomas Nelson, who practised successfully in Richmond for a number of years before retiring to spend his remaining days on his plantation in Louisa. William A. Patteson, who had moved from Petersburg to Richmond in 1834 and acquired a worthy local reputation, succeeded to the office in 1845, being reëlected in 1846 and 1848. In 1847 John A. Cunningham was president. In 1850 Dr. Haxall was for the third time the recipient of this office. During this period the Society remained a local Richmond organization, with some associate and nonresident members, holding its monthly meetings in the Hall of the Richmond Library Association at Eleventh and Main Streets. Case reports and a formal essay, which was made the subject for discussion, constituted the usual program, and a generous sprinkling of controversial subjects made the meetings spirited.

About 1846 an attempt at state-wide organization was made. Physicians outside the city resented the fact that the Richmond group controlled the Society and accused them of trying to legislate for the state. The Richmond group was

[5] Transactions of the American Medical Association, 1872, v. 23, p. 599.

jealous of its charter and repeatedly voted down any plan which seriously altered it. The proposed publication of a journal was rejected, the Society deeming it "inexpedient at this time to take any action on the subject."[6] A proposal to organize auxiliary societies was approved in 1848, but produced few tangible results. The *Stethoscope,* started in 1851, the only medical journal at this time in the state, was warm in its advocacy of a state-wide association, pointing out the need for unity and strength in working for medical legislation—the repeal of the law which taxed "the profession of medicine, without protecting or even recognizing it, the enactment of laws for the suppression of quackery, and the promotion of science, a registration act, a licentiate board, a proper coroner's system, and other measures of this character. . . ."[7] By February 1851 there were enough members from the state at large in the Society not only to question Richmond's supremacy but to permit the passage of a resolution, offered by William W. Parker, "that a committee of seven be appointed to report on a plan of organization of the profession throughout the state." The plan as adopted in April of this year, however, affected very little the constitution and by-laws of the Society, except to make the meetings annual instead of monthly.

Meanwhile, pending actual organization of a state-wide association, which was scheduled for April 1852, the old Society continued its monthly meetings. At the June meeting, 1851, there were thirty members present, and James Beale of Richmond, first vice-president, presided. New members admitted to the Society were: M. H. Houston of Wheeling, John G. Skelton of Powhatan, Carthon Archer of Henrico, Frank Powell of Middleburg, and H. Tatum of Chesterfield.[8]

At the July meeting there were twenty-six members present. New members were: N. F. Rives, J. F. Peebles, and J. H. Claiborne of Petersburg; P. S. Carrington, R. A. Lewis, P. H. Cabell, Peterfield Trent, and John C. Coleman of Richmond; L. N. Ligon, Nelson Court House; Zachary Lewis of King and Queen; W. B. Cochran of Middleburg; T. M. Boyle of Loudoun; James Johnson of Hicks' Ford, and O. L. Drake of Powhatan Court House.[9]

At the August meeting *Uterine Displacements* was the subject of discussion. New members elected were J. L. Dorsett of Chesterfield, E. H. Smith of Dinwiddie Court House, Jesse F. Winfree of Henrico, and W. A. L. Potts and A. C. Pleasants of Richmond.[10]

[6] Stethoscope, 1854, v. 4, p. 533.
[7] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 277.
[8] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 401.
[9] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 455.
[10] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 596.

The next steps in the conversion of the local society into a state organization were the election of Beverley R. Wellford of Fredericksburg to the presidency in May 1851, minor alterations in the constitution, the adoption of a code of ethics for the government of apothecaries and physicians, the substitution of an English for the Latin diploma given to members, and the recommendation of a law registering births, deaths, and marriages. The Society was prospering. There was "already an association of one hundred and fifty of the most respectable members of the profession," and the body contained "much talent and learning."[11]

On April 27, 1852 the first annual meeting of the reorganized society was held under the presidency of Dr. Wellford. The physicians of the state had been summoned "for the purpose of effecting a thorough organization of the profession, and for advancing the interests of medical men in the commonwealth."[12] At this meeting Goodridge A. Wilson offered a series of resolutions which were unanimously adopted, contemplating an efficient organization of the profession, the appointment by law of a board of medical examiners, and the elevation of standards of medical education. Other resolutions completed the state-wide organization of the Society and pledged its support to those medical schools which should coöperate with it in carrying out the Society's proposals for reform.[13] In the election of officers James Beale (1803-1890) was chosen president. He was long an active practitioner of Richmond and is buried in St. John's churchyard.

Reference is made at this time to the "Medical Hall of Virginia," a "beautiful and spacious room which has been fitted up, on the corner of Main and 12th streets by the executive committee of the state society in conjunction with the medico-chirurgical," the new organization of local physicians.[14] W. J. Clark, librarian and curator of the Society, appealed through the *Stethoscope* to all the fellows of the Society for contributions to the library, herbarium, and museum, which were being established at the new headquarters.[15]

Thomas P. Atkinson of Danville, who succeeded Dr. Beale, was responsible for the Society's venture into journalism with the purchase of the *Stethoscope and Virginia Medical Gazette.* Other officers elected in 1853 were: Carter Page Johnson of Richmond, H. C. Worsham of Dinwiddie, Charles Bell Gibson of Richmond, Thomas Creigh of Greenbrier, A. T. B. Merritt of Richmond,

[11] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 278.
[12] Stethoscope and Virginia Medical Gazette, 1854, v. 4, p. 579.
[13] Stethoscope and Virginia Medical Gazette, 1854, v. 4, p. 581.
[14] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 504.
[15] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 507.

and Francis Stribling of Staunton, vice-presidents; P. C. Gooch, recording secretary; Richmond A. Lewis, assistant secretary; W. D. Haskins, corresponding secretary; F. W. Roddey, assistant corresponding secretary; James Bolton, treasurer; W. J. Clark, librarian; and W. D. Haskins, R. W. Haxall, S. Maupin, J. A. Cunningham, and F. H. Deane, nominating committee.[16]

At the October meeting, 1853, Dr. Bolton offered a resolution, which was passed, urging upon the legislature a bill "requiring that *the venders of all secret nostrums* be required to put on each package of their medicines a printed label, in plain English, stating the ingredients of which it is composed."[17]

All was not yet well with the association. This October meeting was poorly attended, and most of the time was spent in attacks and counter-attacks upon medical teaching in Richmond. The struggle of the medical faculty with the trustees of Hampden-Sidney was at its height, and the profession throughout the state was bitterly divided on the subject. *The Virginia Medical and Surgical Journal* regretted that, "so far as we have learned, not a single scientific question was mooted during the session."[18]

The next year the same idle talk went on. George L. Upshur opposed as undignified and futile the legislation that was urged against the sale of quack medicines.[19] The establishment of a society-owned journal was the principle subject discussed, with much ill feeling aroused. The president of the Society this year was Carter P. Johnson.

At the annual meeting in Richmond in 1855, out of a membership of 450, there were twenty in attendance, with only six from outside the city. The following officers were elected: president, H. C. Worsham, of Dinwiddie; vice-presidents, Charles Bell Gibson of Richmond, William Craighead of Danville, George L. Upshur of Norfolk, John Staige Davis of the University of Virginia, Gearge T. Yerby of Northampton, and Pitman C. Spencer of Petersburg; recording secretary, Theo. P. Mayo; assistant, William P. Hill; corresponding secretary, William D. Haskins; assistant, William E. Wilson; treasurer, Charles E. Anderson; librarian and curator, Peterfield Trent; committee on nominations, F. W. Deane, James Bolton, Albert Snead, John A. Cunningham, and George C. Minor.[20] The Society adjourned after two days, leaving behind it not one single scientific contribution to be entered on its record.[21] Interest con-

[16] Virginia Medical and Surgical Journal, 1853-'54, v. 2, p. 123.
[17] Virginia Medical and Surgical Journal, 1853-'54, v. 2, p. 121.
[18] Virginia Medical and Surgical Journal, 1853-'54, v. 2, p. 126.
[19] Virginia Medical and Surgical Journal, 1854-'55, v. 3, p. 80.
[20] Virginia Medical and Surgical Journal, v. 4, p. 421.
[21] The Virginia Medical and Surgical Journal declared in disgust: "The Medical Society of Virginia has never existed . . . an association in which Richmond has ever held the controlling power . . . never can become the representative of the medical men of the state." 1855, v. 4, p. 257.

tinued to dwindle, and the last meeting of the Society was held in 1859, with L. S. Joynes presiding and thirty-four members present. Its death was caused not by the approaching war but by insistence upon a resolution advocating a board of medical examiners.[22]

Another hiatus of eleven years, marked by the chaos of the Civil War, interrupted the life of the Society. It was at the call of the medical societies of Lynchburg, Richmond, and Abingdon that a convention of 147 physicians of the state met in the Chemical Hall of the Medical College of Virginia in Richmond on November 2, 1870 to organize again the Medical Society of Virginia. It is this date that the Society now officially recognizes as its birthday. James B. McCaw of Richmond presided, and Landon B. Edwards of Lynchburg acted as secretary.[23] The convention was in session two days, drawing up a constitution and by-laws; urging "our medical brethren in the several towns and cities of Virginia to convene and organize local societies auxiliary to the Medical Society of Virginia;" rebuking "the low-fee and eleemosynary system of education at present in vogue in some of the medical schools of the country;" adopting a bill providing for a board of medical examiners, to be presented to the next General Assembly; appointing a committee to memorialize the legislature in favor of such a board; and making plans for the next annual meeting. Robert S. Payne (1809-1884), a graduate of the University of Pennsylvania in 1831, medical officer in charge of the Confederate Ladies' Hospital, Lynchburg, during the war, prominent member of the Lynchburg medical association, and delegate to the International Medical Congress in 1876, was elected president.[24] John S. Wellford of Richmond, John Staige Davis of Charlottesville, William Selden of Norfolk, Thomas E. Brown of Abingdon, V. T. Churchman of Greenville, and Hugh McGuire of Winchester were elected vice-presidents.

The Society was incorporated by an act approved January 14, 1871 and met in October of that year in Lynchburg, with an attendance of 238 members. It heard an inspiring address by Dr. Payne; decided to press again its bill for a board of medical examiners, which the last legislature had defeated; received the report of its secretary and transacted routine business; listened to a disappointing scientific program; and adjourned after electing Archibald M. Fauntleroy (1837-1886) of Staunton its next president. Dr. Fauntleroy was the son

[22] Proceedings of the Medical Society of Virginia, 1870, p. 9.
[23] With the exception of one year, Edwards held the position of secretary through the remaining years of the century.
[24] Transactions of the Medical Society of Virginia, 1885, p. 284. Virginia Medical Monthly, 1884-'85, v. 11, p. 357.

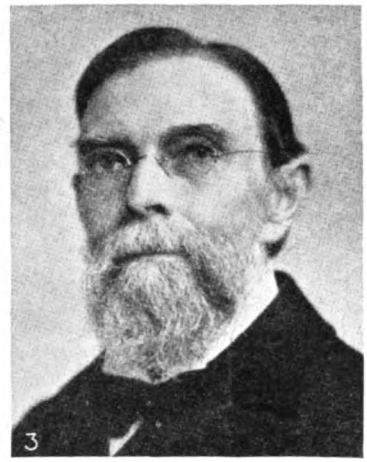
of General Thomas T. Fauntleroy, U. S. A. He graduated from the Virginia Military Institute and took a year's medicine at the University of Virginia before receiving his M. D. degree from the University of Pennsylvania in 1860. Commissioned assistant surgeon in the United States army, he resigned in 1861 and, after serving as surgeon in several Confederate military hospitals in Virginia and as chief-of-staff to General Joseph E. Johnston in 1861 and 1862, became medical director at Wilmington, North Carolina. After the war he practised in Staunton and in 1880 succeeded Robert F. Baldwin as superintendent of the Western Lunatic Asylum. He also served on the State Board of Health and as physician to the Virginia Institution for the Deaf, Dumb and Blind.[35]

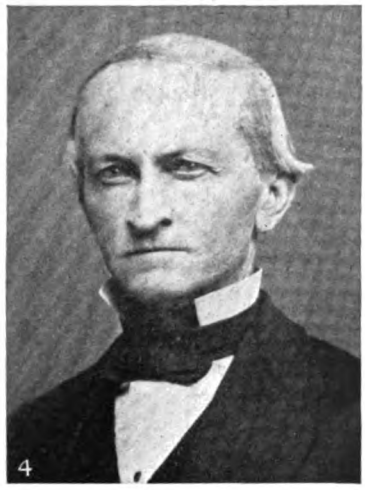
The meeting of 1872 in Staunton was marked by a new feature—an address to the public, this year given by Landon B. Edwards. An elaborate report of the committee on epidemics was heard, besides a long article by Thomas P. Atkinson on *The Anatomical, Physiological, and Pathological Differences Between the White and Black Races.* It was announced that the Society's petition to the legislature for a state board of health and vital statistics had succeeded and that the governor had appointed the members of this board. There was little cause for satisfaction, however, as the bill carried a joker which "rendered the law wholly nugatory": Section 5 had been altered to read, "said Board of Health shall not in any way be a charge upon the State." Deprived of all financial support the board was destined for a number of years to be little more than a figurehead.

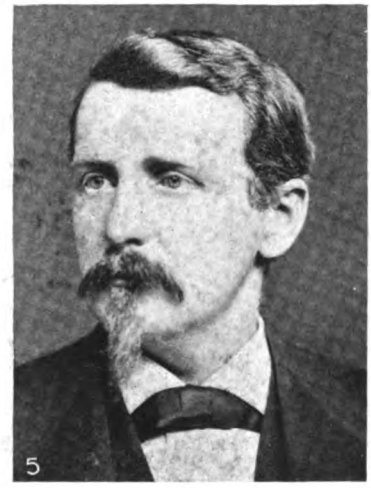
At the end of the session Harvey Black (1827-1888), of Blacksburg, was elected president of the Society. He had graduated in medicine from the University of Virginia in 1849, was hospital steward to a Virginia regiment in the Mexican War and surgeon in charge of field hospitals in the medical corps of the Confederate States army. In 1876 he was made superintendent of the Eastern State Hospital. Private practice in Blacksburg, a term in the state legislature, and service on the first state medical examining board preceded his appointment as superintendent of the Southwestern State Hospital at Marion in 1885.[36]

The fourth annual meeting of the Society convened in Norfolk in 1873 and elected as president Alfred G. Tebault (1811-1895) of London Bridge. The next year he opened the meeting in Abingdon with an address in which he

[35] Kelly and Burrage: Dictionary of American Medical Biography, p. 399. Virginia Medical Monthly, 1886-'87, v. 13, p. 300.
[36] Virginia Medical Monthly, 1888-'89, v. 15, p. 605.







PRESIDENTS OF THE MEDICAL SOCIETY OF VIRGINIA

1. Carter P. Johnson. 2. James Beale. 3. J. Herbert Claiborne.
4. Levin S. Joynes. 5. Francis D. Cunningham.

1. JOHN CRINGAN, of Richmond. 2. JOHN FLOYD, Governor of Virginia. 3. PHILLIP HANCOCK, of Chesterfield County.
4. JOHN THOMAS, of Richmond. 5. JOHN DOVE, of R ichmond. 6. WILLIAM H. RICHARDSON, of Richmond.

enumerated at length the evils which the legislature should correct: only the enactment of suitable laws could prevent the increase of quacks, "the malpractice of incompetent mid-wives," and the adulteration of drugs. The insanitary condition of the state, with malaria prevalent over large areas, could be improved by adequate support of the State Board of Health. He denounced "compounders of secret nostrums," "the cancer doctor," and the "various abortionists and panders of sexual vice." Dr. Tebault was a native of Charleston and a graduate of the South Carolina Medical College. After coming to Norfolk in 1832 to assist in combating a cholera epidemic he settled in Princess Anne County, where he remained for the rest of his life in spite of tempting offers to join the faculties of at least two medical colleges.[27]

One of the features of this 1874 session was a paper by William C. Dabney, of Charlottesville, on *The Development of Connective Tissue.* Dr. Dabney was one of the early possessors of a microscope, and his papers show his interest and familiarity with the new science of histology.

Samuel C. Gleaves (1823-1890) of Wytheville succeeded to the presidency and presided over the Richmond meeting in 1875. He had been a student at Emory and Henry College and had taken his degree in medicine from the University of Pennsylvania. From surgeon to the Forty-fifth Virginia Infantry he was elevated to be medical director of the Army of Northwest Virginia. Resuming practice in Wytheville after the war he was made a director of the Western Lunatic Asylum and of the Medical College of Virginia.[28]

At the 1875 meeting James L. Cabell reported the results of an elaborate questionnaire sent to physicians all over the state in a lengthy paper on *Defective Drainage in Virginia.* He considered the situation serious: in Norfolk in 1873, with a population of 21,000, there were 159 deaths "from diseases that may be ascribed in part to insufficient drainage"—intermittent fever, typhoid, meningitis, tuberculosis, pneumonia, bronchitis, and pleurisy.[29] At this meeting the Society instituted a custom to which it adhered for years—that of hearing formal reports on the progress made in the various branches of medicine during the preceding twelve months. William C. Dabney reported on advances in anatomy and physiology, James L. Cabell on advances in hygiene and public health, and Henry Latham on advances in medicine.

[27] Kelly and Burrage: Dictionary of American Medical Biography, p. 1127. Transactions of the Medical Society of Virginia, 1894, p. 294; 1895, p. 215.
[28] Kelly and Burrage: Dictionary of American Medical Biography, p. 443. Transactions of the Medical Society of Virginia, 1890, p. 272.
[29] Transactions of the Medical Society of Virginia, 1875 p. 76.

Francis Deane Cunningham was elevated to the presidency, and in his address at the 1876 meeting in Charlottesville declared that Virginia is the "paradise of Charlatans," since the only requisite for practice "is that the candidate should be the fortunate possessor of a ten-dollar note with which to purchase a State license," and that those abound "whose only evidence of medical knowledge is the self-conferred title of Doctor and the possession of a State license." He commented on the low standards for graduation and the great extent to which some of the colleges carried the system of beneficiaries; and lamented the helplessness of the State Board of Health without funds and the powerlessness of the profession to secure by legislative enactment a state examining board.

The meeting of 1877 was held in Petersburg under the presidency of James L. Cabell of Charlottesville, who in his address regretted the summary rejection by the legislature of a bill to regulate the practice of medicine and surgery and dwelt at length upon the importance of securing an annual appropriation to enable the Board of Health to function. The reports on the advances in medicine this year were made by M. G. Ellzey of Blacksburg, Robert J. Preston of Abingdon, and L. S. Joynes of Richmond. At this meeting there were distinguished guests: Robert Battey of Georgia and Lewis Sayre of New York both read papers.

The next annual session met in Richmond in October 1878. The president, John Herbert Claiborne of Petersburg, speaking of the advances in medicine, declared: "The microscope, the ophthalmoscope, the endoscope, the spectroscope, the aspirator, electricity, the vivisectionist, the organic chemist, have played sad havoc with the lessons that some of us learned a quarter of a century ago."[80] Reverting to the old question of the Board of Health he continued: "In our own State, we have to record, with humiliation, the establishment of a Board of Public Health, and the refusal of any appropriation to give life and force to the law." Appropriations are made by the city authorities for all sorts of objects, "But ask for an appropriation to help to cleanse the Augean stalls, whose stench, worse than the fumes from Tartarus, are welling up from street and court and alley, and carrying death and desolation to every home and house —chasing out the pure air which God gave men to breathe, and choking with mephitic horror the innocent and helpless—and the municipal father's heart grows very hard, and his ear very dull, and his understandings very obtuse, and his faith in the Lord very strong."[81]

[80] Transactions of the Medical Society of Virginia, 1878, p. 334.
[81] Transactions of the Medical Society of Virginia, 1878, p. 335.

The meeting of 1879 was held in Alexandria. The president was Levin S. Joynes (1819-1881), a walking encyclopedia, a great writer, and an invincible debater. He was a native of Accomac County, a graduate in medicine from the University of Virginia, and spent several years studying in Dublin and Paris. When he came to Richmond in 1855 to practise and teach in the Medical College of Virginia he was already well known in Philadelphia, where he had been professor of physiology and legal medicine in the Franklin Medical College.[33]

At this 1879 meeting J. Marion Sims was a guest of honor and read a paper on hepatic abscess. Much time was devoted to a consideration of the medicinal value of the mineral waters of Virginia, and separate committees were appointed to study and report on the sulphur waters, the alum and chalybeate waters, the lithia and alkaline waters, and the thermal waters. Of the 2,126 physicians in the state less than 400 held membership in the Society at this time.

The meeting of 1880 was held in Danville under the presidency of Henry Latham (1807-1884), a leading physician and citizen of Lynchburg.[33] The next year, at Old Point Comfort, Hunter McGuire was in the chair, and for the first time a presidential address was devoted to a technical theme, *Cancer of the Breast.* The Society considered but did not adopt a plan for a "Virginia physicians' mutual aid association"; heard charges preferred against one of its members, C. A. Bryce; listened to the long reports of its committees on the various departments of medicine; and ended by dealing summarily with its previously selected subject for discussion, *Summer Complaints of Children.*

A dull and uninspiring meeting, devoid of original papers of any value, was held at the Fauquier White Sulphur Springs in 1882. The president was George W. Semple of Hampton (1810-1883), a grandson of Dr. William McKenzie of Manchester and a great-grandson of Dr. Kenneth McKenzie of Williamsburg. He had been the leader in the Society's effort to secure a state medical examining board in 1875.[34]

Interest in the next meeting, held at Rockbridge Alum Springs, centered in diseases of the eye, ear, nose, and throat. The presiding officer was William D. Cooper (1820-1897), of Morrisville, a graduate of the University of Pennsylvania, enjoying the confidence of a large clientele in Fauquier and neighboring counties.[35]

[33] Obituary in the Virginia Medical Monthly, 1880-'81, v. 7, p. 894.
[33] Obituary in the Virginia Medical Monthly, 1884-'85, v. 11, p. 61.
[34] Virginia Medical Monthly, 1883-'84, v. 10, p. 818. Transactions of the Medical Society of Virginia, 1884, p. 6.
[35] Virginia Medical Semi-Monthly, 1897-'98, v. 2, p. 468. Transactions of the Medical Society of Virginia, 1895, p. 263.

Rawley Springs entertained the fifteenth annual convention in 1884. Papers on typhoid, malaria, electricity, and mineral springs featured the meeting. The passage of the anatomy act and the creation of the long-fought-for Board of Medical Examiners was announced. A vote of thanks was tendered the Honorable John D. Moore of Albemarle County and the Honorable Henry S. Trout of Roanoke County, sponsors of the bill in the Senate and House. The bill had been passed in spite of violent opposition by the homeopaths. In its final form it provided for three examiners from each congressional district and two from the state at large, to be appointed by the governor from a list of names recommended by the Society. The first examiners were nominated at this meeting. The Society also instructed the president of the Board of Health to appoint a health officer in every county and outlined the duties of these officers.

James Edgar Chancellor (1826-1896), the presiding officer of the 1884 meeting, had begun his apprenticeship in medicine under Dr. George F. Carmichael of Fredericksburg and later studied at the University of Virginia before graduating from Jefferson College in 1848. A practitioner in Virginia until 1861, a Confederate surgeon, a demonstrator of anatomy at the University of Virginia, 1865-1872, a professor in the University of Florida in 1883, he had had a varied and busy life. In 1885 he became a member of the medical examining board and continued to serve on the board and to practise at the University of Virginia until his death.[86]

He was succeeded as president of the Medical Society by Samuel K. Jackson (1817-1899), A. B. of Columbia College, New York, A. M. of Washington College, Connecticut, M. D. of Washington University, Baltimore. Settling in Norfolk he was highly regarded as a practitioner and a contributor to medical journals. His report on advances in hygiene before the Society in 1879 is believed to have enunciated for the first time "the doctrine of ptomaines." An article of his on *Natural Agencies Inhibiting the Life Processes of Pathogenic Organisms* appeared in the transactions of the Ninth International Medical Congress in 1887.[87] At the 1885 meeting at Alleghany Springs Joseph M. Toner contributed an important paper on Elisha Dick, and William C. Dabney, chairman of the State Board of Examiners, announced the organization of this Board of thirty-two physicians, appointed by the governor, with Francis D. Cunningham as vice-president and Hugh T. Nelson as secretary. Reference was made to the efforts of a committee appointed the previous year and headed

[86] Virginia Medical Semi-Monthly, 1896-'97, v. 1, p. 334. Transactions of the Medical Society of Virginia, 1893, p. 268.
[87] Transactions of the Medical Society of Virginia, 1895, p. 281; 1899, p. 285.

by Joseph A. White to work out plans for the organization of a Tri-State Medical Society. Into this meeting was injected the personal quarrel of two Norfolk physicians, Samuel K. Jackson, an ex-president of the Society and Herbert M. Nash, a future president. Jackson opposed the nomination of Nash to the Board of Medical Examiners. He had seen him give "two drops of castor oil, two drops of spirits of turpentine, and half a drop . . . of tincture of opium" for dysentery and was convinced that he was "tinctured with homœopathy." The matter ended in Jackson's expulsion from the Norfolk Medical Society and in Nash's failure of appointment to the Board.

At this time the *Virginia Medical Monthly* declared that the Medical Society of Virginia was organized "on a better plan than most State organizations, in that it is not a delegated body, but every Fellow, as soon as elected, enjoys equal privileges with any or all the rest of the Fellows." It warned that "Objectionable laws of the Commonwealth such as those that deny remuneration for medical expert testimony in courts, that allow but a pittance for legally authorized post-mortem examinations, that make no compensative provision for required professional services rendered the poor of counties and towns, that give no prior claim to the doctor under certain circumstances for the collection of his fees—these and many other acts of commission and omission are to be corrected only by a thorough organization of the profession. . . ."[38]

The seventeenth annual session met in Fredericksburg in 1886. Rawley W. Martin was president. He had received his medical education in New York City, was lieutenant-colonel of the Fifty-third Virginia Regiment and was wounded at Gettysburg. He moved to Lynchburg from Chatham in 1895 and was a member of both the State Board of Health and the medical examining board.[39] The Fredericksburg meeting was notable for action taken requesting the General Assembly to appropriate funds for the establishment of a state general hospital. There were the usual addresses and long papers, Otis F. Manson's on *Malarial Hæmorrhage* being 114 pages. Membership in the Society this year numbered 596.

The 1887 meeting was held in Richmond. An attempt was made to abolish the enormously long papers previously read. A resolution of Charles R. Cullen provided that no paper should exceed twenty minutes, but the Society was not ready for this piece of modernism, and the resolution was tabled. Changes in the medical practice act were favored—abolition of the privilege of examination before three individual examiners, reduction of members on the Board from

[38] Virginia Medical Monthly, 1885-'86, v. 12, p. 384.
[39] Transactions of the Medical Society of Virginia, 1895, p. 289; 1912, pp. 11, 14, 259.

thirty-two to twelve, reduction of homeopathic representatives from five to two, and the requirement of properly attested diplomas from applicants. Bedford Brown (1825-1897) of Alexandria was in the chair. He was a native of North Carolina, had studied medicine under Benjamin W. Dudley of Kentucky, and graduated in medicine from both Transylvania and Jefferson. After serving as surgeon and medical director in the Confederate army he settled in Alexandria and became a frequent contributor to medical literature, a member of the first medical examining board, a president of the Southern Gynecological Association (1892), and a vice-president of the American Medical Association.[40]

The meeting of 1888 was held in Norfolk. Its presiding officer, Benjamin Blackford (1834-1905) of Lynchburg, son of Dr. Thomas T. Blackford, was a graduate of Jefferson, a Confederate surgeon, and in 1890 became superintendent of the Western State Hospital for the Insane.[41] The Norfolk meeting approved a lengthy report of the Board of Medical Examiners. The subject for general discussion—*Atypical Forms of Typhoid Fever*—was led by William C. Dabney, and was about the only worth-while contribution to the meeting.

In 1889 the Society held its first meeting in Roanoke, with Elhannon W. Row (1833-1900) as president. After graduating from the University of Pennsylvania and serving as surgeon to the Fourteenth Virginia Cavalry Dr. Row had settled in his native Orange County, acquired considerable reputation, and served in the state legislature.[42] Again the scientific program of the meeting was given over to the usual addresses and reports of committees on advances in the several departments of medicine. The subject for general discussion was croupous pneumonia. At this session Dr. William D. Turner proposed that the Society should henceforth meet in Richmond, but the motion was lost, and the Society met at Rockbridge Alum Springs in 1890. Oscar Wiley of Salem was its president, and the Society numbered 774 members this year. Dr. Wiley (1830-1904) had studied at Emory and Henry College and under John Peter Mettauer before graduating from Jefferson in 1852. He was a surgeon in the Confederate service and for many years practised in Salem.[43] He was succeeded in office by William W. Parker (1824-1899), a graduate of the Medical College of Virginia, major of artillery in the Confederate army, and a prominent

[40] Transactions of the Medical Society of Virginia, 1895, p. 258; 1898, p. 274. Virginia Medical Semi-Monthly, v. 2, p. 372.
[41] Transactions of the Medical Society of Virginia, 1893, p. 263. Kelly and Burrage: Dictionary of American Medical Biography, p. 104.
[42] Transactions of the Medical Society of Virginia, 1895, p. 305. Kelly and Burrage: Dictionary of American Medical Biography, p. 1064.
[43] Transactions of the Medical Society of Virginia, 1895, p. 319; 1904, p. 326.

figure in Richmond until his death.[44] The meeting in Lynchburg over which he presided in 1891 discontinued the reports on advances in the several departments of medicine, because they were "at best only a reiteration of advances which have already been read in medical journals and for that reason are stale." Fifteen original essays on subjects to be chosen by the authors were substituted.

Henry Grey Latham (1831-1903) of Lynchburg, son of Henry Latham, a former president of the Society, was elected president in 1891 and presided at the Alleghany Springs meeting the next year. Beginning life as an engineer, he later took up medicine and graduated from the University of Virginia in 1851. He served in the Civil War as line officer and surgeon. As a wit, toastmaster, and author of humorous sketches and poetry he enjoyed much local fame.[45]

The Society convened in Charlottesville in 1893. Here a "microscopical soirée" was a feature, and fifty or more microscopes with appropriate slides were demonstrated by "proficient students." There were 150 fellows at this meeting, with Herbert M. Nash (1831-1911) in the chair. He was a son of Dr. Thomas Nash of Norfolk, a victim of the yellow fever epidemic of 1855. A graduate in medicine at the University of Virginia, he became chief surgeon in the artillery section of the Third Army Corps in the Civil War. Returning to Norfolk to practise he acquired considerable reputation in plastic surgery and gynecology.[46]

The twenty-fifth annual meeting of the Society was held in Richmond, October 1894. William P. McGuire (1845-1926) of Winchester gave a presidential address on the history of medicine in Virginia. The subject for general discussion was appendicitis. After advocating a law to control the sale of poisons, the Society adjourned to meet next year in Wytheville under the presidency of Robert J. Preston of Marion. The 1895 meeting was poorly attended but not altogether uneventful. It recommended to the legislature as one of the pressing needs of the times the establishment of an epileptic colony, and it took a new stand in regard to membership in the Society: "Among the list of applicants for fellowship was the name of a lady. After considerable discussion as to whether or not women should be admitted as members of the Society, she was almost unanimously elected."[47]

[44] Transactions of the Medical Society of Virginia, 1899, p. 267.
[45] Kelly and Burrage: Dictionary of American Medical Biography, p. 721.
[46] Transactions of the Medical Society of Virginia, 1895, p. 295; 1911, p. 239. Stewart: History of Norfolk County, p. 523.
[47] Virginia Medical Monthly, 1895, v. 22, p. 747. Emily Chenault Runyon, a graduate of the Woman's Medical College of Chicago, had passed the Virginia State Board in May 1895, was a resident of Richmond, and was proposed by J. W. Long.

Papers on *Serum Therapy, Intestinal Indigestion, Typho-Malarial Fever, Abdominal Contusion, Tri-Facial Neuralgia, Uric Acid Diathesis, Surgical Immunization, Treatment of Epilepsy, Treatment of Tuberculosis, Changes in Disease and their Treatment in the Last Forty Years,* and *Sudden Blindness and Squint* distinguished the meeting in 1896 at Rockbridge Alum Springs over which William L. Robinson (1845-1914) of Danville presided. He was a native of Cumberland County, a graduate in medicine from the University of Virginia, and a member of the State Board of Medical Examiners, as well as the author of a number of medical and gynecological articles.[48]

Still showing a preference for the health resorts, the Society next met at the Hot Springs. George Ben Johnston was president. On this occasion the Price-Nash Prize of $450 for the best essay on the *History of Medicine and Surgery in Virginia* was awarded to Arthur Jordan of Richmond. The second prize of $100 went to Hugh S. Cumming, now surgeon general of the United States Public Health Service, the third prize of $75 to Hugh McGuire of Alexandria, the fourth prize of $50 to Jesse Ewell of Ruckersville, and the fifth prize of $25 to W. T. Walker of Lynchburg. The winning essay represented an enormous mass of collected material, which might well have overpowered the committee by its very bulk. At this session L. G. Pedigo moved "that it is the sense of this society that its policy of receiving worthy women possessing the necessary medical qualifications into full active fellowship is established as the permanent policy of this society." The vote was seventy-seven for and eleven against this resolution.[49]

At Virginia Beach the Society assembled for its twenty-ninth session in 1898. The president was Lewis E. Harvie (1834-1918), a native of Richmond, a graduate of the V. M. I. and the Medical College of Virginia, a member of the State Board of Health, and an active practitioner of Danville until his death.[50] The last meeting of the century was held in Richmond, attended by four hundred fellows. Jacob Michaux (1851-1915), the president, was a native of Powhatan County but at that time a resident of Richmond. He had graduated from the Medical College of Virginia, was an active contributor to the journals, a professor in the University College of Medicine, and was generally regarded as an excellent practitioner.[51] He addressed the Society on needed legislation in regard to nongraduates appearing before medical examining boards, reci-

[48] Transactions of the Medical Society of Virginia, 1895, p. 304; 1914, p. 190.
[49] Transactions of the Medical Society of Virginia, 1897 p. 275.
[50] Transactions of the Medical Society of Virginia, 1898. Virginia Medical Monthly, 1918, v. 45, p. 128.
[51] Transactions of the Medical Society of Virginia, 1895, p. 293; 1915, p. 217.

procity between state boards of examiners, reduction in the size of the United States Pharmacopœia, restriction of the sale of patent and proprietary medicines, inspection of foods and drugs, and the reorganization of local medical societies.

II. CITY AND COUNTY SOCIETIES

The Medical Society of Virginia for the first thirty years of its existence was in reality Richmond's local association. When it gave promise of becoming a state organization in 1852 a preliminary meeting to organize a new society for Richmond was held. On June 12, 1852 this organization was perfected as the Medico-Chirurgical Society of Richmond City, and a constitution was adopted. It was determined to share the new hall of the Medical Society of Virginia, "a fine room on the corner of Main and 12th streets," fitted up with a herbarium, museum, and library.[52] Its first officers were John Dove, president; Carter P. Johnson and C. S. Mills, vice-presidents; Richmond A. Lewis, recording secretary; W. D. Haskins, corresponding secretary; James Bolton, treasurer; P. H. Cabell, librarian.[53] The president's address at the first meeting was said to have been "chaste and well received." The meetings were held twice a month and were given over to case reports, the exhibition of pathological specimens, and formal papers. For a number of years it was the custom of the state medical journal to publish a summary of the leading papers. On one occasion the *Stethoscope* complained: "They were generally given in a very desultory manner, and our power of reporting was completely baffled."

The next year John A. Cunningham was made president at an annual meeting attended by only fourteen of the Society's forty-four members. The roster included Robert G. Cabell, G. C. Cabell, P. H. Cabell, James Dove, John Dove, John Dove, Jr., James Bolton, James Beale, James B. McCaw, Thomas Johnson, Carter Johnson, W. Wilson, Goodridge A. Wilson, P. Claiborne Gooch, Charles Bell Gibson, George A. Otis, Peterfield Trent, John P. Little, T. Pollard, James Conway, Albert Snead, Howell Thomas, W. Carter, F. W. Roddey, William W. Parker, O. B. Hill, Frederick Marx, F. H. Deane, A. E. Peticolas and Drs. Higginbotham, Pleasants, Rawlings, Hancock, Broocks, Coxe, Scott, Burton, Palmer, Taylor, Lewis, Mills, Haskins, and Merritt.

The Society did not escape the troubles usually experienced by young organizations, and in 1855, no meetings having been held for seven months, an attempt had to be made to revive it. Only about one-half of the profession of the

[52] The Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 392.
[53] The Stethoscope and Virginia Medical Gazette, 1852, v. 2 p. 447.

city had ever united with the Society, and it had been badly sustained by its members in every way. Its records showed that some half-dozen, who had regularly attended the meetings, had in fact kept the Society in existence.[54] Early in 1855 Dr. Gooch attempted to end the farce of such meetings, asserting "there did not exist sufficient esprit-du-corps among the medical profession of Richmond to sustain any medical organization." His motion was lost, and in hopes of reawakening interest Professor Brown-Séquard, with a paper on galvanism, was invited to appear before the Society. The move bore no permanent results. There is no further record of the organization.

In January 1866 a meeting of the physicians of Richmond was held at the Medical College to organize a new society—the Richmond Academy of Medicine. The officers elected were L. S. Joynes, president; R. W. Haxall, F. H. Deane, and O. A. Fairfax, vice-presidents; I. H. White, recording secretary; R. A. Lewis, corresponding secretary; and J. R. Page, treasurer. The meeting was well attended, but by the time members had been elected to the board of trustees and to the committees on elections, ethics, medical education, by-laws, and constitution, and by the time chairmen of sections on anatomy, physics, surgery, practice, obstetrics, chemistry, and hygiene had been appointed, there must have been very few fellows who had not been called to office.[55] Modeled after the New York Academy of Medicine, the Society held regular meetings the first and third Tuesday nights in its hall adjoining the Y. M. C. A., 817-819 West Main Street. Among its presidents were J. S. Wellford (1874), J. G. Cabell (1875), R. T. Coleman (1876), O. A. Crenshaw (1877), and M. L. James (1878). At first there was much scientific interest, and subjects such as typhoid, malaria, meningitis, diphtheria, consumption, and quinine engaged the attention of the membership. Papers on genito-urinary subjects by Drs. Watkins, Cunningham, and McGuire were frequently presented, and full accounts of the proceedings were published after 1873 in the *Virginia Medical Monthly;* but by 1877 the society had allowed itself to drift away from scientific discussions into long ethical harangues. The disgust of some of its members was voiced in an editorial in the *Virginia Medical Monthly,* which stated that "the Richmond Academy of Medicine proceedings have not been reported for some time because nothing of professional interest has occurred."[56] As a protest the Richmond Medical and Surgical Society was organized in 1880. Its officers were Landon B. Edwards, president; John G. Skelton and M. L. James, vice-

[54] Stethoscope, 1855, v. 5, p. 135.
[55] Richmond Medical Journal, 1866, v. 1, p. 75
[56] Virginia Medical Monthly, September, 1877.

presidents; George Ben Johnston, secretary; Charles S. Brittan, treasurer; and James C. Deaton, librarian.[57] John G. Skelton (1886), Hugh M. Taylor (1887), and T. J. Moore (1888) were later presidents.

The Society met twice a month. Papers were read and cases reported, but interest centered usually in the previously chosen subject for general discussion, led by one of the members. The Society offered the services of its members in the Charleston earthquake in 1886, the president, John G. Skelton, telegraphing: "If any doctors are needed, telegraph us how many, and we will bear all expenses."[58] In 1888 two prizes were offered, one for an essay showing the best original work and the other for an essay on surgery.

In 1890 a union of the two societies was effected. The Richmond Academy of Medicine and Surgery, as it was called, began with sixty charter members. William W. Parker was the first president, and the vice-presidents were Hugh M. Taylor, William S. Gordon, and George Ben Johnston. Edward McCarthy was secretary; C. L. Cudlipp, assistant secretary; Moses D. Hoge, treasurer; and William F. Mercer, librarian.[59] The meetings were held twice a month at the Y. M. C. A., and an annual banquet was long featured.

One of the Academy's first discussions was on epidemic influenza, raging in Richmond at the time. Many of the doctors stated they had never seen or heard of the disease before. Others recalled that similar epidemics had occurred in 1790, 1830, 1832, and 1847. Dr. Edwards maintained that it was a neurotic disease and noncontagious. In 1890 the library of M. A. Rust was left the Academy. For want of a more suitable place it was at first housed in the state library and later completely lost. Ethical discussions persisted at the society's meetings, and the amount of heat generated over these questions was amazing. Women were not admitted to membership until 1910. In 1923 the name of the organization was again changed, to the Richmond Academy of Medicine.

Soon after the formation of the first Medical Society of Virginia, in Richmond, the Medical Society of the Valley of Virginia was organized in Winchester (May 1825) with the avowed object of investigating "the nature and proper treatment of diseases and other subjects agitated among medical men, [and for] the collection of scarce and valuable books. . . ." At its first meeting John Esten Cooke was elected president; Robert T. Baldwin and Taliaferro Stribling, vice-presidents; James W. Thomson, secretary and orator; Hugh H. McGuire, treasurer; and Archibald S. Baldwin, librarian. The initiation fee

[57] Virginia Medical Monthly, 1880-'81 v. 7, p. 749.
[58] Virginia Medical Monthly, 1886-'87, v. 13, p. 514.
[59] Virginia Medical Monthly, 1889-'90, v. 16, p. 978.

was five dollars, and meetings were to be held monthly in April, June, August, October, November, and December in the Common Council Hall at Winchester.[60]

At the office of W. I. Michie, August 28, 1846, sixteen Petersburg physicians assembled—John Beckwith, B. H. May, P. C. Spencer, J. J. Thweatt, S. A. Hinton, R. E. Robinson, J. F. Peebles, T. S. Beckwith, W. I. Michie, C. F. Couch, W. F. Jones, J. Bragg, W. French, Jr., J. Cox, W. Durkin, and S. White. Thomas Robinson was elected president, John Bragg and Joseph E. Cox, vice-presidents; John F. Peebles, corresponding, and J. J. Thweatt, recording secretaries. The society was called the Petersburg Medical Faculty.[61]

Dr. John Herbert Claiborne has left his recollections of the early days of the Petersburg Faculty. "When I came to this city on the first of January, 1851," he writes, "I found the physicians organized in a body known as the 'Petersburg Medical Faculty.' This organization had . . . proclaimed as its object, 'First. The advancement of medical science; Second. The promotion of the legitimate interest of the practitioners of medicine, and the elevation of professional character amongst the people and amongst ourselves; Third. The establishment of harmony, good feeling, and amity of action amongst all engaged in the honorable practice of our art.'" "Every physician on coming to the city was waited on by the secretary of the faculty and given an opportunity to avail himself of these benefits," and those who failed to connect themselves with the association were deprived of "the benefits of contact and consultation" with their fellow physicians. Annual meetings were held at the homes of the members, in rotation, and "it was an unwritten law that the member at whose house the meeting was held should give a supper, and these annual suppers were veritable symposia, where rich viands and generous wines conspired to create and cement good fellowship, and to preserve an honorable esprit de corps."[62]

The *Stethoscope* reported in January 1851 that besides the Petersburg Faculty there were local societies in the towns of Fredericksburg, Norfolk, Wheeling, and Charlottesville, and in the counties of Loudoun and Greenbrier. Some of these societies were in operation before 1848, for in that year delegates went to the American Medical Association meeting from the medical societies of Petersburg, Fredericksburg, and Norfolk, and Ohio and Loudoun Counties.[63]

The Medical Society of Clarke County was formed about 1851. On March 24, 1851, with eight members present, it adopted a constitution and elected

[60] American Medical Recorder, 1826, v. 9, p. 224.
[61] Minutes of the Petersburg Medical Faculty through kindness of Dr. W. M. Bowman.
[62] Claiborne: Seventy-five Years in Old Virginia, p. 116.
[63] Transactions of the American Medical Association, 1848, p. 21.

Randolph Kownslar, president; J. F. Fauntleroy, vice-president; S. S. McNeill, recording secretary and treasurer; H. T. Barton, corresponding secretary and librarian; J. A. Haynes, Dr. Randolph, and Dr. Harrison, publishing committee.[64]

On November 10, 1851 "a majority of the medical profession" of the county of Louisa convened in the office of Mercer W. Quarles and organized the Louisa County Medical Society. William A. Gillespie was elected president; William J. Pendleton and Madison Pendleton, vice-presidents; A. C. Isbell, recording secretary; William L. Burruss, corresponding secretary; Julian Kean, treasurer. Representatives of the Society were active in the Medical Society of Virginia, and delegates were sent to the American Medical Association meeting in Richmond in 1852.[65]

Following in the wake of the state-wide interest in the Medical Society of Virginia which culminated in its reorganization in 1852, there was a general organization of county medical societies. Taking the lead in this movement was Cumberland County, whose physicians met February 23, 1852 to appoint delegates to the state medical convention and who in April organized with the physicians of Powhatan and adjoining counties the Chapman Medical Society. Thomas L. Robinson was chairman of the Cumberland County meeting and became a vice-president of the Chapman Society, which met four times a year, in Cartersville, Cumberland Court House and Powhatan Court House in turn. It early adopted as its own the code of ethics of the American Medical Association.[66]

On April 12 of the same year the Buckingham Medical Society held its first meeting and elected W. P. Moseley, president; James Austin and William Swoope, vice-presidents; C. E. Davidson, secretary; and W. F. Hall, treasurer.[67] The Medical Society of Nottaway came into existence in April 1852 with William H. Perry, president; R. B. Triggle, first vice-president; B. N. Royal, second vice-president; Thomas R. Hurt, third vice-president; J. M. Hurt, secretary; and R. Connolley, treasurer. In January 1853 it adopted an elaborate tariff of fees.[68]

On July 22, 1852 the Thirteenth Congressional District Medical Society was organized in Abingdon with W. P. Floyd, president; A. R. Preston, first vice-president; E. D. Kernan, second vice-president; James H. Dunn, recording sec-

[64] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 240.
[65] Stethoscope and Virginia Medical Gazette, 1852, v. 2, pp. 40, 41.
[66] Stethoscope and Virginia Medical Gazette, 1852, v. 2, pp. 215, 690.
[67] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 349.
[68] The charge for a day visit under four miles was $2.00; for a night visit under four miles, $5.00, with $4.00 for each additional mile; sitting up with a patient all night was $10.00; a consultation, $5.00, etc. Stethoscope, 1853, v. 3, pp. 45, 235.

retary; W. F. Barr, corresponding secretary; D. Trigg, treasurer. John Peter Mettauer, Hugh Holmes McGuire, Charles Bell Gibson, and R. W. Haxall were elected honorary members. The name of the organization was later changed to the Medical Society of South West Virginia. Dr. Preston became president in 1853.[69]

The Pittsylvania Medical Society was organized April 19, 1852 in the offices of Drs. Barksdale and Belt. Its first officers were Nathaniel T. Green, president; Chesley Martin, vice-president; and H. Singleton Belt, secretary.[70] In October the physicians of Essex County met in Tappahannock, presided over by Thomas C. Gordon, with Thomas Latane acting as secretary.[71] Complete organization of a medical society for the county was deferred until November.

The Medical Society of Culpeper held its first quarterly meeting at Culpeper Court House on June 19, 1852. W. C. Ashby delivered the leading address on typhoid fever, laying particular stress upon the importance of autopsy examinations in the study of medicine.[72] The same year the Society sent delegates to the American Medical Association, as did the town of Alexandria, the counties of Greensville and Gloucester, the Valley of Virginia Medical Society, which had sent delegates since the meeting of 1850, and Loudoun County, which had been represented as early as 1848. The Prince Edward Medical Society was first represented in 1855.

In February 1853 the Prince George Medical Society was organized at the Court House. Its officers were P. B. Thweatt, president; Alexander Bryant, Robert Harrison, T. A. Hall, T. S. Beckwith, and Peter Eppes.[73].

In July 1853 the Amelia County Medical Society met for the first time and voted to unite with the Nottoway Medical Society. Those present were Thomas Meaux, Benjamin C. Jones, Richard F. Taylor, Richard T. Wilson, William H. Robertson, William C. Booth, Philip F. Southall, and William J. Cheatham.[74]

A little later the Washington County Medical Association held its first meeting in Abingdon and elected N. Snead, president; James H. Dunn, vice-president; E. M. Campbell, corresponding secretary; and A. C. Maxwell, recording secretary. Other members were John Keys, Robert F. Preston, Benjamin Zimmerman, E. C. Teeter, A. R. Preston, M. F. Barr, and Samuel Dunn.[75] The Society planned to meet twice a year, and adopted the code of ethics of the

[69] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 447; 1853, v. 3, p. 483.
[70] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 350.
[71] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 617.
[72] Culpeper Observer, July 2, 1852.
[73] Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 158.
[74] Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 486.
[75] Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 485.

American Medical Association. None of the local societies survived the Civil War. After the war there was another outburst of local societies, with the revival of some of the old organizations and the formation of new ones.

In Norfolk on June 3, 1870 the medical faculty assembled for the purpose of organizing the Norfolk County Medical Society. In attendance were R. B. Tunstall, William W. Murray, George D. Townsend, I. C. Baylor, H. P. Ritter, William M. Selden, W. J. Moore, James D. Galt, R. H. Harris, J. H. Gaskins, J. T. Godfrey, W. L. Broaddus, J. B. Whitehead, T. B. Ward, and Alexander Tunstall. H. P. Ritter was appointed temporary chairman, and James D. Galt was made secretary. On June 8 the first regular meeting of the Society was held in Wood's Piano Rooms on Market Square. At this time William M. Selden was elected president, William J. Moore and R. B. Tunstall, vice-presidents, H. P. Ritter, secretary, and W. M. Murray, treasurer. At a later meeting the code of ethics of the American Medical Association was adopted, dues were fixed at $2.00 per annum, and arrangements entered into whereby the society agreed to pay $2.50 per month for its rooms during the summer and $3.00 per month during the winter. On September 6, in response to a circular from the Lynchburg Society, a committee was appointed to meet with a convention of state physicians in Richmond to organize a state medical society.[76]

By 1871 local societies were in existence as auxiliaries of the State Society, in Amherst, Augusta, Brunswick, Loudoun, Louisa, Rockbridge, Rockingham, Shenandoah, and Warren Counties, and in the towns of Abingdon, Danville, Lynchburg, Norfolk, Petersburg, Richmond, and Winchester.[77] In 1872 two more local organizations were formed and became affiliated with the State Society, the South-Eastern Medical Society, representing Princess Anne and Norfolk Counties, and the Montgomery County Medical Society.[78]

Although the Danville Medical Association was in existence in 1871 and the Medical Society of Virginia met in Danville in 1880, little is known of it. The Danville Academy of Medicine was not organized until 1894 or 1895. William L. Robinson, who had been president of the earlier society in 1880, was the first president of the new organization, and William C. Day was secretary. Other charter members were Lewis E. Harvie, R. B. James, Franklin George, S. E. Hughes, J. S. Irvine, William Nelson, James A. Anderson, R. C. Barksdale, Luther L. Vann, and Charles W. Pritchett. Drs. Robinson and Harvie became presidents of the State Society. While the Danville Academy of Medicine has

[76] Minute Books of the Norfolk County Medical Society, and a personal communication from Dr. F. G. Rinker, of Norfolk.
[77] Transactions of the Medical Society of Virginia, 1871, p. 8.
[78] Transactions of the Medical Society of Virginia, 1872, p. 8.

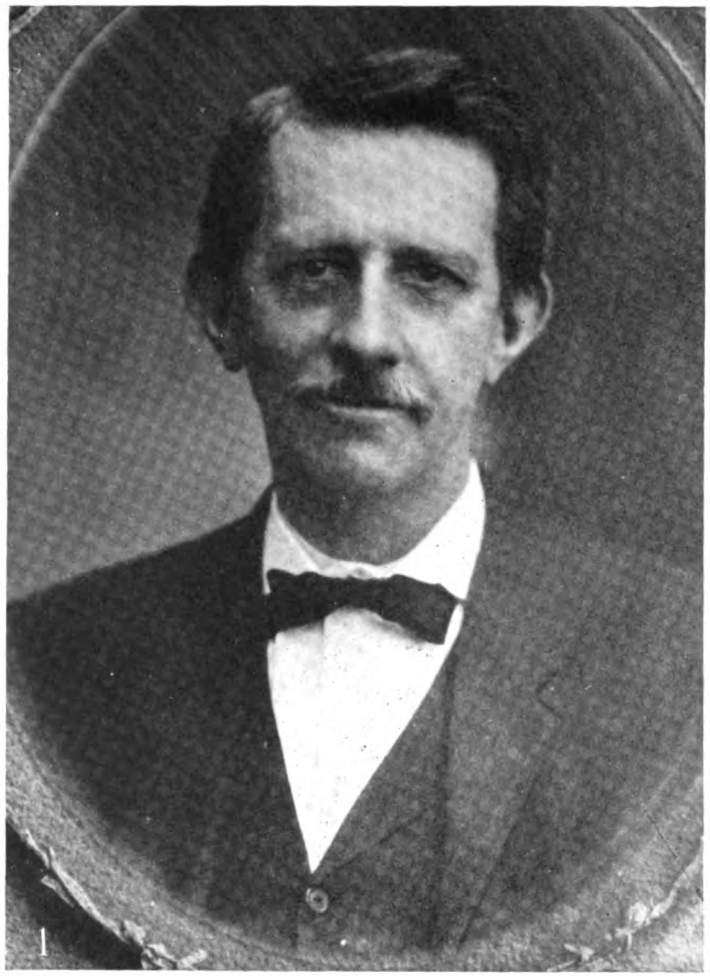
been in continuous existence since its founding it was not at first very active, and few meetings were held until the reorganization of 1899. At that time it was decided to coöperate with the women of the city who were operating the Danville General Hospital. The hospital was shortly enlarged and the Society took on new and lasting vitality.[79]

On August 1, 1879 the Fauquier Medical Society held its initial meeting at Warrenton at the call of Frederick Horner. John Ward, ex-surgeon U. S. N., and John Hicky, C. S. A., were among those present. Two years later, in April 1881, the name of the organization was changed to the Northeast Virginia Medical Society, with W. D. Cooper, president, H. M. Clarkson, corresponding secretary, and I. O. Hodgkin, recording secretary. At the same time the Society voted to become "practically, a clinical Society, for the examination of cases of interest," and to follow "the example initiated by the Southwest Virginia Medical Society in allowing indigent persons" to come before the Society and be treated free of charge.[80] This was the only local medical society in Virginia to attempt a medical publication of its own. The bimonthly journal which it brought out in 1889, wth Dr. Clarkson as editor, was designed to encourage monthly social and professional reunions of the fellows representing the counties of Fauquier, Culpeper, Prince William, Loudoun, Rappahannock, Alexandria, and the District of Columbia. Its officers in 1889 were Henry Frost, president, and Thomas W. Smith, vice-president. The Society ceased to exist in 1892.

The Abingdon Academy of Medicine was reorganized shortly after the war and held monthly meetings. It was one of the most active of the local societies and was instrumental in bringing about the formation of the Medical Society of Virginia in 1870. In 1871 it passed resolutions advocating a board of medical examiners.[81] In 1874 E. W. Campbell was president, J. S. Apperson, vice-president, W. F. Barr and R. J. Preston, secretaries, and H. M. Grant, treasurer. In 1876 Robert J. Preston was president, in 1877 W. L. Dunn, and in 1878 J. S. Apperson, for the second time. This year delegates were sent to both the North Carolina Medical Society and the American Medical Association.[82]

In 1875 the Frederick County Medical Society was reorganized with John S. Guyer of Middletown, president, and W. P. McGuire of Winchester, secretary. Well attended monthly meetings were held in Winchester.

[79] Personal communication from Dr. I. C. Harrison, of Danville.
[80] Virginia Medical Monthly, 1880-'81, v. 7, p. 953; 1881-'82, v. 8, p. 762; 1888-'89, v. 15, p. 75.
[81] Virginia Clinical Record, v. 1, p. 221.
[82] Virginia Medical Monthly, 1876-'77, v. 3, p. 211; 1878-'79, v. 5, p. 154.



LANDON B. EDWARDS

THOMAS P. ATKINSON

EARLY MEDICAL BILLS

The King William County Medical Association was organized the same year. Robert G. Hill was president in 1875 and 1876, and George William Pollard, secretary, reported the Society's proceedings in the *Virginia Medical Monthly.* In 1880 John Lewis read a paper on *Contagium Vivum and Germ Life,* maintaining that "a *materies morbi*—a morbific agent *sui generis*—if introduced into the system, produces a peculiar disease, as the seed produces a peculiar plant. It may enter the system in the air we breathe; it may be swallowed in the food." An interesting feature of this Society was the appointment of three members from different parts of the county "to report a synopsis of their practice during the intervals between meetings; thus forewarning us of the approach of an epidemic."[83]

The Wythe County Medical Society was in operation in 1877, when it elected S. R. Sayers, president; W. H. Bramblett, vice-president; J. B. Pierce and James B. Jordan, secretaries, and R. E. Moore, treasurer.[84] In October 1885 the Rappahannock Medical Society, composed of physicians in Fredericksburg and its vicinity, held its first meeting in Fredericksburg. Officers were S. W. Carmichael, president; A. J. Chandler, vice-president; and P. S. Ray, secretary and treasurer.[85]

The Medical Association of Alexandria was in successful operation in January 1884 with William Gibson, president, and Bedford Brown, secretary. A Fluvanna County Medical Society was organized in 1888 and promptly adopted a "uniform tariff of fees."[86] The Roanoke Valley Medical Association under H. E. Jones, president, S. G. Staples, vice-president, R. Gordon Simmons, secretary, and J. H. Lawrence, treasurer, was the result of a called meeting of the physicians of Roanoke, June 10, 1891.[87] In 1892 the Smyth County Medical Society was organized with E. T. Brady, president, S. W. Dickinson, vice-president, and J. D. Buchanan, secretary. Monthly meetings were held in Marion.[88] The Piedmont Medical Society, with Ernest Woolfolk, president, and William J. Crittenden, M. J. Payne, R. L. Taliaferro, and G. W. Scott among the charter members, was organized in Orange County in April 1896.[89] Walter A. Newman was president in 1898. In November 1899 the physicians and dentists of Staunton met and formed a Medical and Dental Society. Dr. H. H. Henkel was president.[90]

[83] Virginia Medical Monthly, 1880-'81, v. 7, p. 546; 1877-'78, v. 4, p. 197.
[84] Virginia Medical Monthly, 1877-'78, v. 4, p. 319.
[85] Virginia Medical Monthly, 1885-'86, v. 12, p. 582.
[86] Practice, 1888, v. 2, p. 113.
[87] Virginia Medical Monthly, 1891-'92, v. 19, p. 86.
[88] Virginia Medical Monthly, 1891-'92, v. 19, p. 815.
[89] Medical Register, 1897-'98, v. 1, p. 352.
[90] Virginia Medical Semi-Monthly, 1899-1900, v. 4, p. 638.

The physicians of the southwestern part of the state, who, the *Virginia Medical Monthly* declared, "have been ever active, and always the most numerous attendants upon the sessions of the State Society," reorganized their regional association, the Southwest Virginia Medical Society, in 1880 with William F. Barr, president, Oscar Wiley, vice-president, and John S. Apperson, secretary. Quarterly meetings were held at Marion, featured by free clinics, in which the poor came before the Society for examination, prescription, and operation if necessary, free of charge.[91]

The Seaboard Medical Association with Junius E. Lynch of Norfolk its first president was organized in January 1898, when about a hundred physicians of Tidewater Virginia and North Carolina assembled at Norfolk for that purpose.[92] Shortly afterwards (August 1898) the Tri-State Medical Society, composed of physicians from Virginia and the two Carolinas, was organized at Virginia Beach and held its first meeting in Charlotte, North Carolina, in January 1899. William L. Robinson of Danville was a vice-president, and Paulus A. Irving of Richmond secretary and treasurer.[93] It has steadily grown in popularity and strength, proving itself of great value in cementing professional friendship in the three states.

III. ASSOCIATION OF ARMY AND NAVY SURGEONS

In August 1863 under the auspices of the surgeon general and at the invitation of the faculty of the Medical College of Virginia a large number of military surgeons from in and around Richmond met to organize an Association of the Army and Navy Surgeons of the Confederate States, which continued to the end of the war. The officers were Samuel P. Moore, president; James B. McCaw, first vice-president; Daniel Conrad, C. S. N., second vice-president; W. A. Davis, first recording secretary; W. A. Thom, second recording secretary; M. Michel, first corresponding secretary; S. Jenkins, second corresponding secretary; J. S. Wilson, treasurer. Secondary hemorrhage, chloroform, traumatic aneurism, and the cold water dressing were among the subjects discussed at its meetings and published in its organ, *The Confederate States Medical and Surgical Journal.*

On May 20, 1874 an Association of Medical Officers of the Confederate Army and Navy was founded in Atlanta, Georgia, for the purpose of "rescuing from oblivion all the important medical and surgical facts developed within

[91] Virginia Medical Monthly, 1880-'81, v. 7, pp. 751, 980.
[92] Virginia Medical Semi-Monthly, 1897-'98, v. 2, p. 631.
[93] Virginia Medical Semi-Monthly, 1898-'99, v. 3, pp. 519, 582, 649.

the armies of the Confederate States during the late war." Surgeon General S. P. Moore was made president, and Hunter McGuire became one of the vice-presidents. The meeting was largely given over to organization and plans for preserving the medical records of the war. J. S. Dorsey Cullen, medical director of Longstreet's Corps, was requested to prepare a sketch of the organization and services of the medical department of the Army of Northern Virginia. James B. McCaw and A. N. Talley were drafted for similar service.[94] The meeting in Richmond, October 19, 1875, was notable for the presidential address of Surgeon General Moore, in which he spoke of the work of the Confederate medical bureau, complicated by the prevalence of camp diseases and the scarcity of hospitals. He described the value of Southern medicinal plants when the importation of drugs became difficult, and paid glowing tribute to the capacity of the medical men under him. At this session Hunter McGuire was elected president.[95] After this for a number of years the Association ceased to exist. In 1888 Dr. Edward Warren, who was then living in Paris, attempted to revive it but was unsuccessful. In 1889 Dr. Joseph Jones of New Orleans energetically began assembling all the medical records of the Confederate army he could secure, and a few years later the former Association was revived. The preparation of a medical history of the war was the chief object of the Association, which from time to time published contributions to this subject in the *Southern Practitioner*.[96]

IV. THE AMERICAN MEDICAL ASSOCIATION

The American Medical Association grew out of a national convention which met in New York in 1846 at the invitation of the New York Medical Society. The motive behind the movement was educational. It was an attempt to raise the standard of medical education in the United States, and the voice of the medical schools was loud in its assemblies. Unfortunately its early efforts were largely wasted in idle discussions, chiefly involving medical ethics. To this first convention went three representatives from Virginia.[97]

At the organization meeting held in Philadelphia in 1847 Nathaniel Chapman was elected the first president of the Association. One of the most important reports was brought in by Robert W. Haxall of Richmond, chairman of the

[94] Virginia Medical Monthly, 1874-'75, v. 1, pp. 125, 172.
[95] Virginia Medical Monthly, 1875-'76, v. 2, Appendix.
[96] Virginia Medical Monthly, 1888-'89, v. 15, pp. 268, 439; 1890-'91, v. 17, p. 291. Southern Practitioner, 1906, v. 28, p. 415.
[97] Davis: History of the American Medical Association, p. 37. For a long time representation in the Association was limited to specially elected delegates.

committee to recommend standard requirements for the M. D. degree. The committee, favoring preliminary study under reputable preceptors, followed by a three-year course of six-months, with three months given to dissection, saw its recommendations adopted after no little opposition from the delegates connected with colleges. A committee upon which John Cullen of Richmond served brought in a report advocating a separation of the teaching and licensing authorities.[98] At the first annual meeting at Baltimore in 1848 G. Lane Corbin, Hugh H. McGuire, B. R. Wellford, John F. Peebles and George L. Upshur of Virginia appeared prominently, and the next year at Boston Dr. McGuire was elected one of the vice-presidents.[99]

The fourth meeting of the Association was held in Charleston, South Carolina, in May 1851. The Virginia delegates were B. R. Wellford, P. C. Gooch, M. P. Scott, J. Prosser Tabb, H. C. Worsham, and W. W. Parker from the Medical Society of Virginia; Carter P. Johnson and David H. Tucker from the medical department of Hampden-Sidney College; J. W. Walke and J. G. Lumpkin from the alumni society of the college; Hugh McGuire from the Winchester Medical College; and F. W. Powell from the Loudoun Medical Association.[100] Beverley R. Wellford, a member of the nominating committee, was elected a vice-president; P. C. Gooch was made secretary and a member of the committee on publications; and Robert W. Haxall was made chairman of a committee to investigate the "epidemic diseases of Virginia and North Carolina"—one of the twenty-seven subjects selected by the convention for study and report.

The fifth annual meeting was held in Richmond, May 4-7, 1852. The local committee on arrangements consisted of Robert W. Haxall, chairman; Carter P. Johnson, James Beale, Charles Bell Gibson, Socrates Maupin, W. D. Haskins, C. S. Mills, and Martin P. Scott.[101] The auditorium of the Second Presbyterian Church was used for the assembly, and there were 275 delegates in attendance. Ninety-six of them were from Virginia, forty-three from the Medical Society of Virginia, twenty-nine from seventeen local societies, fifteen from the state's four medical schools, and nine were permanent fellows of the Association. Among other topics a discussion of standards of medical education was actively entered into and the conclusion reached "that this asociation still recommends to the medical colleges the propriety of lengthening their terms of instruc-

[98] Davis: History of the American Medical Association, pp. 43-46.
[99] Transactions of the American Medical Association, 1848, 1849.
[100] Transactions of the American Medical Association, 1851.
[101] Stethoscope and Virginia Medical Gazette, 1851, v. 1, pp. 329-345.

tion."[102] A banquet was given the visitors by the citizens of Richmond at the Exchange Hotel, and the Association voted its thanks for "the elegant, varied and generous hospitality . . . unrivalled even among the festivities of the 'Old Dominion.'" P. C. Gooch was reëlected secretary and a member of the committee on publications, and A. T. B. Merritt was appointed chairman of a special committee "on cholera and its relation to congestive fever." Beverley Randolph Wellford of Fredericksburg was elected president. The Association at this time was not enthusiastically supported by the majority of Virginia physicians. Its constitution was regarded as infringing on "states' rights," and the powerful representation of the colleges was objected to. Declared the *Stethoscope:* "The association ought to be an annual conference . . . of delegates from these state societies only."[103]

The sixth meeting was held in New York, May 3, 1853. The address of President Wellford "reviewed fully and ably the origin, progress, and benefits of the Association, with the objects which should still engage its attention."[104] "The opinions expressed in it in regard to reforms in medical education, the separation of the teaching and licensing power, the necessity for vital statistics," were applauded in Virginia.[105] But as so often happens the advice given in the presidential address came to naught. In spite of appropriate resolutions for their enforcement the proposals were tabled, and the old abuses continued as before.[106] The Association tendered its thanks to the president and ordered the publication of his address in the transactions of the society—the first time that this honor had been conferred.

At the next meeting, held in St. Louis, James L. Cabell of the University of Virginia, chairman of the committee on medical education, made his report. W. D. Haskins of Richmond became chairman of the committee on epidemics of Virginia and North Carolina, and P. C. Gooch chairman of a committee on administration of anæsthetic agents during parturition. In the 1855 meeting there was evidence of increased attention to the scientific side of medicine, and the "utmost harmony prevailed," for the old bone of contention—medical education and the society's responsibility for improvement in standards—was tactfully dropped.[107] By 1860, however, there was again waning enthusiasm, a Virginia editor giving it as his opinion that "The Association has never been a scientific working body, but a debating society, confining itself to the discussions

[102] Transactions of the American Medical Association, 1852.
[103] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 274.
[104] Davis: History of the American Medical Association, p. 121.
[105] Virginia Medical and Surgical Journal, 1853, v. 1, p. 245.
[106] Virginia Medical and Surgical Journal, 1853, v. 1, p. 247.
[107] Virginia Medical and Surgical Journal, 1855, v. 4, p. 512.

of constitutional and ethical questions, attempting to pull down or build up colleges, or to execute impracticable schemes of reform. . . ."[108]

In 1861 Southern representation in the Association naturally ceased, and as late as 1866 Virginia was not participating in the meetings. At the Baltimore gathering in this year the president graciously voiced "regret that these seats hold so few representatives from our sister States of the South. . . . Weary years have dragged on, and . . . we would fain meet again those from whom we have been separated, draw the mantle of forgetfulness over the past, renew to them the expression of our regard, and with them dedicate the hour and the occasion to the sacred cause of learning, friendship and truth."[109] After this there was a gradual return of interest, but for a long time no great zeal was displayed in Virginia for the Association. The *Virginia Medical Monthly* declared of the Atlanta session in 1879 that it had produced so little of novelty, so little of practical interest which had not time and again been printed within the last few years, "that we have reluctantly come to the conclusion that the waste basket is the best place to deposit the notes" taken on its work. The same writer charged that there was "too much machinery" evident in the plan of organization and too great an attempt at "centralization." One recommendation made at Atlanta would if adopted "completely excommunicate the Medical Society of Virginia"; yet the plan of the Virginia Society's organization "is so generally satisfactory that no material change is desirable." The editorial concluded with the plea: "For the sake of the national professional good let us implore that the American Medical Association will not attempt to make the medical profession of America more of a 'trades' union' than it already is."[110]

On May 3, 1881 the American Medical Association met for the second time in Richmond. The meeting was called to order in Mozart Hall by Francis D. Cunningham, chairman of the committee on arrangements. Prayer was offered by the Right Reverend Bishop J. J. Keane and an address of welcome given by Governor F. W. M. Holladay. Among the distinguished visitors present was William Pepper of Philadelphia, who spoke on the increasingly popular subject of zymotic diseases, and Abraham Jacobi of New York, who confined his remarks on children's diseases to the "progress made in our knowledge of the acute contagious constitutional diseases (rubeola, scarlatina, variola and typhoid fever) and the acute contagious affections of the mucous membranes, such as dysentery and diphtheria." John N. Upshur of Richmond reported a

[108] Maryland and Virginia Medical Journal, 1860, v. 14, p. 76.
[109] Transactions of the American Medical Association, 1866, p. 10.
[110] Virginia Medical Monthly, 1879-'80, v. 6, p. 249.

case of paralysis, and William C. Dabney of Charlottesville presented a paper on *The Nature and Treatment of Pneumonia.*

James L. Cabell of the University of Virginia, president of the National Board of Health, read a paper on the International Sanitary Conference of 1881, in which he declared: "There is, therefore, good reason for hoping that an international agreement may be arrived at . . . between the States most frequently threatened with epidemic invasions. And, aside from this, the degree of attention which, as a result of the deliberations of the conference, has been given to the general subject of maritime sanitary police, cannot be without fruit in securing greater cleanliness, better ventilation of ships sailing on the high seas, and, in general, an improved sanitary condition of these important instruments of commerce which have so often been permitted to become the carriers of the most deadly contagia, from the failure to use such precautions as sanitary science suggests, and as, it is hoped, will now be enforced among the maritime powers of the world."[111]

Hunter McGuire, chairman of the section on surgery and anatomy, read a paper on *Operative Interference in Gunshot Wounds of the Peritoneum.* A contemporary observed: "Few surgeons have had greater experience in treating gunshot wounds occurring both in military and civil life, and few have appreciated more fully how unsatisfactory are the results obtained from the expectant or do-nothing plan so much in vogue. The title of the paper indicates the grounds taken by the writer in favor of operative interference, and the views embodied . . . tend to prove the position advanced by the writer, that the patient will exchange an almost certain prospect of death for at least a good chance of recovery, and should, we think, embolden surgeons to think less of expectant treatment and more of operative interference."[112] Dr. McGuire was elected vice-president at this meeting.

The attention of the Virginia profession was directed toward the American Medical Association in 1888, when its journal vigorously condemned the faculty of the Medical College of Virginia for its allegedly hostile attitude toward the state examining board. In 1892 the Association again honored a Virginian, when at its Detroit meeting it elected Hunter McGuire president for the ensuing year. Other presidents who were born in Virginia, with their dates of election to office, were Nathaniel Chapman, 1847; A. Y. P. Garnett, 1888; W. W. Dawson, 1889, and R. Beverly Cole, 1896.

[111] Transactions of the American Medical Association, 1881, p. 338.
[112] Virginia Medical Monthly, 1881-'82, v. 8, p. 169.

CHAPTER V

OFFSPRING OF THE MEDICAL SOCIETY OF VIRGINIA

I. THE STATE BOARD OF HEALTH

JAMES L. CABELL, the prime mover in the national health movement, was the father of the board of health in the state of Virginia. In 1871 he called the attention of the Medical Society of Virginia at its second meeting in Lynchburg to the need for such a board and to the recent request of the American Medical Association that all state societies press for legislative action. A committee consisting of Thomas P. Atkinson of Danville, A. G. Tebault of Princess Anne County, and A. S. Payne of Fauquier County, was appointed and soon afterwards brought in a report in favor of a statute creating a board of health, recommending, "that the Society give it their hearty support, and that they present it to the Legislature as a scheme eminently demanding their attention." The act as prepared by the committee provided that:

"Sec. 1. The Governor shall appoint seven physicians, two from the city of Richmond, and the other five from different sections of the State, who shall constitute the State Board of Health and Vital Statistics. The physicians so appointed shall hold their offices for four years, and until their successors are appointed; and all vacancies in the Board shall be filled by the Governor.

"Sec. 2. The State Board of Health shall place themselves in communication with the local Boards of Health, the Hospitals, Asylums, and Public Institutions throughout the State, and shall take cognizance of the interests of health and life among the citizens generally. They shall make sanitary investigations and inquiries respecting the causes of disease, especially of epidemics and endemics, the sources of mortality among the whites and the blacks, and the effects of localities, employments, conditions and circumstances on the public health; and they shall gather such information in respect to these matters as they may deem proper for diffusion among the people. They shall devise some scheme whereby medical vital statistics of sanitary value may be obtained, and act as an Advisory Board to the State in all hygienic and medical matters, especially such as relate to the location, construction, sewerage and administrations of Prisons, Hospitals, Asylums and other Public Institutions. They shall, at each annual session of the Legislature, make a report of their doings, investigations

and discoveries, with such suggestions as to the legislative action required as they may deem proper.

"Sec. 3. It shall be the duty of the Board, and they are hereby instructed to examine into, and to report what, in their best judgment, is the effect of the use of intoxicating liquor as a beverage upon the industry, prosperity, happiness, health and lives of the citizens of the State; and also, what legislation, if any, is necessary in the premises.

"Sec. 4. The Board shall meet at the Capital of the State, at least once in every three months, and as much oftener as they may deem proper. The first meeting shall be held at the Capital at the expiration of one week after their appointment, or as soon thereafter as practicable, and three members shall always constitute a quorum for business. They shall elect from their own number a President and a Permanent Secretary. The latter shall reside at the Capital, and shall be their Executive Officer. No member, except the Secretary, shall receive any compensation; but the actual travelling expenses of members while engaged in the duties of the Board shall be allowed, and paid out of the Treasury of the State.

"Sec. 5. The Secretary shall perform and superintend the work prescribed in this Act, and shall perform such other duties as the Board may require. He shall also furnish the Legislature, when in session, such information cognate to this Act as, from time to time, they may deem necessary. An annual salary of $....., and his office, and other necessary expenses incurred in the performance of his duties, shall be paid to him in the same manner as that of other State officers.

"Sec. 6. The expenses of the Board, including the salary of the Secretary, shall not exceed four thousand dollars a year."[1]

The Society presented the bill to the legislature. It passed in February 1872, but was so emasculated by the omission of financial support as to render its work hopelessly ineffective. The first board consisted of J. Grattan Cabell, L. S. Joynes, and George Ross of Richmond, J. W. Lawson of Isle of Wight, Landon B. Edwards of Lynchburg, A. M. Fauntleroy of Staunton, and James L. Cabell of the University of Virginia, president. Dr. Joynes became secretary of the board.

The annual report for 1874 well summarized sanitary progress in the state up to that time. "In the State of Virginia no general sanitary system has heretofore been in existence. The legislation of a general character in relation to the public health has been mainly limited to the power conferred upon courts and

[1] Transactions of the Medical Society of Virginia, 1871, p. 13.

town councils to establish hospitals for the reception of persons affected with smallpox or other contagious diseases; the subject of quarantine; the provision of the appointment of a vaccine agent; the requirements that when a mill is proposed to be erected upon any water course a jury will enquire (among other things) into the probable effect upon the health of the neighborhood; and the imposition of a penalty for the sale of unwholesome provisions and adulterated food, drink, or medicine. With the exception of the boards of health in the cities and some of the larger towns, no sanitary organization has existed. . . ."[2] After repeated unsuccessful attempts to secure state support, individual members meanwhile paying their own expenses to meetings, the board at length gave up and disbanded after a few years.

What argument could not achieve, fear accomplished years later. In the spring of 1893 cholera, then prevalent in Europe, threatened this country. The public became alarmed. The Richmond Chamber of Commerce took action and petitioned the Governor to appoint a board of health under the law still on the statute books. Governor McKinney, March 16, 1893, commissioned a new board consisting of Robert J. Preston of Marion, Paul B. Barringer of the University of Virginia, James Parrish of Portsmouth, Landon B. Edwards and Hugh M. Taylor of Richmond, R. W. Martin of Chatham, president, and Paulus A. Irving of Richmond, secretary.

The Governor defrayed the expenses of the first meeting of the board from his contingent fund, and the Richmond Chamber of Commerce contributed three hundred dollars toward the immediate problem at hand. Dr. Barringer was authorized to prepare a circular dealing with cholera and its prevention. This practical and comprehensive publication was soon issued and distributed throughout the state. It represented the first constructive work of the Virginia State Board of Health.

Encouraged by this beginning, the board sought to introduce into the legislature an entirely new bill which would provide for adequate financial support. The advocates of this measure were defeated. In 1895-1896 they again went before the legislature, seeking only to amend the old law in such a way as to give general powers and a small appropriation. After a hard fight they succeeded in securing an appropriation of two thousand dollars. The advocates of the board realized, at this stage, that the chief obstruction to their plans lay in an unenlightened public opinion. The public had no conception of the need for a board of health and vital statistics, or of its possibilities. To popularize the board, to give dignity to the organization, and to bring its work more inti-

[2]Annual Report of the State Board of Health, 1874, v. 3, p. 595.

mately before the public, members of the profession in the various counties at this time undertook to represent the board as local health authorities. This volunteer organization did much good.

In 1899 the work of the board was further enlarged as a result of public interest aroused by the outbreak of smallpox throughout the state and by the presence of yellow fever in the Soldiers' Home at Hampton. Dr. Charles R. Granby of Norfolk prepared a new bill carrying an appropriation of five thousand dollars, which became a law, March 7, 1900.

Under this law the first attention of the board was directed to the education of the public in matters of sanitation and public health. With this end in view, the monthly *Bulletin,* begun as early as 1896 and still issued, was vigorously used to call the public's attention to prevailing epidemics and the nature and prevention of various infectious and contagious diseases.

As early as 1900 the board was engaged in making urinalyses and examining sputa, blood, and tumors as an aid in the diagnosis of contagious and infectious diseases. It was prepared to investigate outbreaks of typhoid and other fevers, offering chemical and bacteriological examinations of milk and water supply. Vaccine virus, as well as diphtheria antitoxin, anti-pneumococcus, and anti-streptococcus sera, were supplied free of charge. From the first there was opposition on the part of physicians to this feature of the board's work. In their enthusiasm health authorities have often infringed upon the rights and privileges of the practising profession and for this reason have not always enjoyed its support.

Just before 1900 the board's activities were directed against the three largest death-producing diseases in the state—smallpox, typhoid fever, and tuberculosis. It sought to educate the public to the point of universal vaccination. It succeeded best with school authorities, who in many counties succeeded in enforcing the law requiring children to be vaccinated before enrollment. The alarming prevalence of typhoid fever throughout the state during the past two years was pointed out by the board, and, although the manner in which the disease spread was not fully understood, the part that milk and water played in its etiology was recognized as important, and this knowledge was given to the public. In 1900 tuberculosis in the state exceeded by fifty per cent all other infectious and contagious diseases. It was the commonest and most fatal disease in Virginia. The board sought to convince the public, as well as

the profession, of the contagious nature of the disease and of the far-reaching danger of a single unrecognized case.[3]

II. THE MEDICAL EXAMINING BOARD

In April 1851 Goodridge A. Wilson of Richmond advocated before the Medical Society of Virginia the creation of a board of medical examiners, and in March 1852 a committee of five was appointed on motion of Philip Claiborne Gooch, "To memorialize the legislature of Virginia for the passage of a law for the establishment of a state board of examiners for the examination and license of practitioners of medicine in this commonwealth."[4] At length, in March 1858, the bill was introduced into the legislature by Dr. J. H. Claiborne, state senator from Petersburg. It provided that no one without a license should practise for a fee and that the licensing board should consist of nine physicians appointed by the governor every six years. Failure greeted this bill, as it did another presented the next year.

The establishment of an examining board was one of the main objects of the Medical Society of Virginia when it organized in 1870, and a committee was early appointed to work for such an act. At each meeting of the Society the prevalence of quackery and the number of poorly prepared physicians practising in the state were pointed out and reforms demanded. In 1875 the Society prepared and presented to the legislature a medical practice act, but without success. Although the bill was favorably reported upon in committee in 1876, it was thought injudicious to press immediately for a vote. In the fall of 1877 Thomas J. Riddell, on behalf of the Society, presented to the legislature a petition signed by more than sixty leading physicians urging the passage of the act. In 1879 the bill failed in the House after having passed in the Senate.[5] In 1881 the Medical Society of Virginia again initiated action and appointed a committee of five to petition the legislature for the establishment of a board of medical examiners. Success rewarded this effort a few years later, and the bill was passed in 1884.

Of the need for a medical practice act in Virginia there could be no doubt. Dr. William C. Dabney wrote in 1883: "It is perhaps not generally known that Virginia is one of the few States in the Union which permits any one to practise medicine within her borders without undergoing a preliminary examination, or

[3] Irving, Paulus A.: The State Board of Health of Virginia; Its History, Work and Possibilities, Transactions of the Medical Society of Virginia, 1900, p. 132.
[4] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 197.
[5] Transactions of the Medical Society of Virginia, 1880, p. 210.

furnishing satisfactory proof that he or she has received a medical education; but such is the case. No education, whether medical or general, is required; it is not even necessary that the applicant for practise shall be able to read and write, and there are some so-called physicians in the State who can hardly write their own names."[6]

The first Virginia State Board of Medical Examiners was organized in Richmond on November 15, 1884.[7] At this time twenty-eight states and territories had similar examining boards.[8] Applicants were examined by the Virginia board under eight divisions—chemistry, anatomy, hygiene, physiology, materia medica and therapeutics, obstetrics, practice of medicine, and surgery. Medical jurisprudence was later incorporated with hygiene, and gynecology with obstetrics. Eight subcommittees, of four members each, conducted the examinations. At the first examination, April 8, 1885, there were twenty-three examiners and twenty-five applicants. The standard for passing adopted by the board was seventy-five per cent, and there were six failures.[9] Two of the rejected applicants, in defiance of the law, forthwith entered upon the practice of their profession. The board brought both into court and secured their indictment and conviction. As an alternative to the formal examination before the whole board the law at first allowed examinations before any three individual members. This privilege was restricted in 1888 and abolished in 1892. Early in 1886 the medical practice act was amended to add five homeopathic physicians to the examining board. One was assigned to each standing committee. The number of homeopaths was reduced from five to two in 1894. Henry Grey Latham was made president of the board in 1886 after the resignation of William C. Dabney.

The set of by-laws drawn up by the board established a minimum standard for licensure. Any candidate who failed to answer one-third of the questions in a single branch could be refused his license, even though he aggregated seventy-five per cent of the whole. When the board held its spring session in

[6] Virginia Medical Monthly, 1883-'84, v. 10, p. 66.

[7] Wm. C. Dabney of Charlottesville, president; F. D. Cunningham of Richmond, vice-president; Hugh T. Nelson of Charlottesville, secretary; W. W. Douglas of Richmond County, treasurer; Harvey Black, Montgomery County; C. C. Conway, Culpeper County; O. A. Crenshaw, Richmond; Chas. R. Cullen, Henrico; S. W. Dickinson, Smyth County; O. B. Finney, Accomac; W. J. Harris, Nottoway; L. Lankford, Southampton; H. Grey Latham, Lynchburg; Richmond A. Lewis, Richmond; Rawley W. Martin, Chatham; Wm. P. McGuire, Winchester; Henry M. Patterson, Staunton; Jesse H. Peek, Hampton; Robert J. Preston, Abingdon; W. L. Robinson, Danville; Hugh Stockdell, Petersburg; Z. J. Walker, Rockbridge County; Oscar Wiley, Salem; R. D. Huffard, J. H. Claiborne, S. W. Carmichael, John H. Neff, Alex. Harris, Bedford Brown, T. B. Greer, and G. D. Meriwether. Thomas B. Ward was one of the original members, but he died in April 1885, without having served.

[8] Virginia Medical Monthly, 1885-86, v. 12, p. 254.

[9] Journal of the American Medical Association, 1885, v. 4, p. 442.

Richmond, April 5, 1887, nineteen applicants appeared. Only seven attained the required standard. Of the five applicants who had been examined by individual members of the board during the year none had failed. It was not surprising, therefore, that when the board met again, on October 17, 1887, of twenty-one applicants only two appeared. One stepped up to the blackboard, looked at the questions there, and, remarking that he preferred to take his examinations before individual members, walked out. The other candidate was taken violently ill, and the examination abruptly ended. The board immediately appealed to the Medical Society for authority to seek legislative amendments restricting the holding of individual examinations. Indignities and insults of every sort were heaped upon the examining board in the press, and when the matter was being thrashed out before the House and Senate disgraceful scenes were enacted. The board had its way, however, and on March 3, 1888 the amended law received the governor's signature. This fight had imperiled the very life of the board. It was threatened again, July 17, 1888, when only eight of its members answered the summons of the secretary. The eight members judged the situation a critical one, particularly embarrassing after their recent legislative fight. The president promptly rearranged the committees of the board, and they proceeded with the examination, rejecting five out of twelve applicants.

There were eminent observers of the work of the Virginia board at this time. The *Journal of the American Medical Association* praised it in a long editorial, September 8, 1888, and William Osler wrote the same year: "I feel convinced that the future of medical education in this country lies largely in the establishment of State Boards, such as exist in Virginia and North Carolina,[10] which (1) control the entrance examination, (2) regulate the curriculum, and (3) grant the license to practice."[11] The excellent performance of the Virginia board was due to the fact that it was controlled by the profession and not by politics, that it had no connection with the medical schools, and that the license was given after rigid examination, regardless of the possession of college diplomas. Of the 243 candidates who had been examined up to 1889 only fifty-two per cent had been licensed to practise.[12] The awkwardly large board was reduced by the law of 1894 to one member instead of three from each Congressional district. The two members appointed from the state at large were continued.[13]

[10] North Carolina established the first examining board in this country.
[11] Journal of the American Medical Association, 1888, v. 11, p. 429.
[12] Virginia Medical Monthly, 1889-'90, v. 16, p. 76.
[13] The fee for the examination was five dollars.

From its conception the Board of Medical Examiners was subject to the stiffest opposition by irregulars, homeopaths, and others; by those who failed to meet its requirements; by the medical schools whose candidates it rejected and whose poor teaching it exposed; by medical journals outside the state; and even by some of the profession itself. A quack was arrested in Richmond for practising without passing the board's examination. His counsel claimed the state law did not apply to transient nonresidents, since it made no provision for the registration of their certificates. This point was sustained by Judge Samuel B. Witt, and the quack was released after paying a thirty-dollar fine for not securing a license.[14] No single agency in Virginia has contributed so much to the elevation of standards of medical education and practice as has the Board of Medical Examiners. As the creation of the Medical Society of Virginia, its accomplishments reflect glory upon the parent society which conceived and supported it and controlled its membership.

[14] Virginia Medical Monthly, 1892-'93, v. 19, p. 183.

CHAPTER VI

MEDICAL JOURNALS

THERE was only one medical journal published in this country before 1800.[1] After this year hundreds of journals made their appearance. Most were short-lived, and the majority have long since been forgotten, but others took their places and by 1913 the United States was publishing nearly one-half of the 1,654 medical journals produced in the world.[2]

No medical journal was published in Virginia until 1851. From that time until the end of the century no less than sixteen made their appearance. Most of them were ephemeral and survived only a few years. Virginia has published no purely scientific or experimental journals and none limited to a single specialty. Most were devoted to medicine in general, with original articles, case reports, summary statements of the progress of medicine, reviews, abstracts, and translations from foreign literature. There was some medical gossip and a due proportion of ponderous, often controversial, editorials. Medical journals published in Virginia, particularly during the last half of the Nineteenth Century, catered to Southern supporters. The leading articles were often contributions by men of international reputation from without the state, but on the whole the journals carried too little original material and relied too much upon padding with extracts from other periodicals. Partisanship was frequently evident in the editorial department, and the advertising matter was often given over to extravagant claims that would debar it from modern scientific magazines. But with all their weaknesses the Virginia medical journals served an extremely useful function in the development of medicine within the state. Not only did they give a medium of expression to the doctors who before this had had to rely upon the *American Journal of the Medical Sciences,* the *Boston Medical and Surgical Journal,* and other Northern publications, but they enabled local public sentiment in the profession to voice itself as never before, and the wholesome propaganda sponsored by the journals themselves introduced many reforms which would never have come without such powerful allies. Higher standards of medical education, the Board of Medical Examiners, the Board of Health, and many other evidences of progress are the direct outcome of the activity of the medical journals of the state.

[1] Medical Repository, 1797-1824, published in New York.
[2] Garrison: History of Medicine, p. 807.

ON DISPLACEMENTS

OF THE

NON-GRAVID UTERUS;

THEIR

LOCAL AND CONSTITUTIONAL EFFECTS.

BY

J. F. PEEBLES, M. D.,

OF PETERSBURG, VIRGINIA.

THE DISSERTATION

TO WHICH THE

FISKE FUND PRIZE WAS AWARDED.

Published by Request of the Rhode Island Medical Society.

PHILADELPHIA:
T. K. AND P. G. COLLINS, PRINTERS.
1858.

PRACTICE:

THE JOURNAL FOR THE BUSY DOCTOR

POINTED, PRACTICAL, PROGRESSIVE.

VOLUME 1.

FROM DECEMBER, 1886, TO DECEMBER, 1887, INCLUSIVE.

J. F. WINN, M. D.,

Editor and Publisher,

Corresponding Secretary Medical Society of Virginia; Member Richmond Academy of Medicine, Member Richmond Medical and Surgical Society, Member American Public Health Association, etc., etc.

RICHMOND, VIRGINIA.

THE

STETHOSCOPE,

AND

VIRGINIA MEDICAL GAZETTE:

A

MONTHLY JOURNAL

OF

Medicine and the Collateral Sciences.

EDITED BY

P. CLAIBORNE GOOCH, A. M., M. D.

[illegible]

[illegible]

VOL. I.

RICHMOND:
[illegible]
1851

THE

VIRGINIA

CLINICAL RECORD.

A MONTHLY JOURNAL

OF

Medicine, Surgery, and the Collateral Sciences.

EDITOR,

J. S. DORSEY CULLEN, M. D.

[illegible]

VOLUME I, 1871-2.

[illegible]
RICHMOND, VA.
1872

Title page of a prize essay.
Title pages of Virginia medical journals.

The first medical periodical to appear in Virginia was *The Stethoscope, and Virginia Medical Gazette: a Monthly Journal of Medicine and the Collateral Sciences.* It was first published in Richmond in January 1851, edited and owned by Philip Claiborne Gooch, and it continued with this title and editorship for three volumes—through December 1853. For several years before Dr. Gooch began his venture publication of a medical journal had been agitated in the state society, but no one had been found to assume the responsibility and risk. In 1850 "the state society determined to publish quarterly a bulletin of its transactions, together with other matter worthy of publication. When it was found that the 'committee of publication' never reported, and that this project of *starting* a journal was not carried out, the *Stethoscope* was determined upon" by its editor. It was a creditable publication, modeled after contemporary American periodicals and made up of original articles, editorials, notices, and selections from foreign and American journals.

Dr. Gooch was not only the pioneer medical editor of Virginia but a prominent figure in the American Medical Association. He was twice elected its secretary, and his "arduous and successful labors as secretary of the meetings at Charleston and Richmond merited the regard of the association."[3] At the annual meeting in 1854 he was appointed chairman of its special committee on the administration of anæsthetic agents during parturition.[4]

He had had the advantage of foreign study and possessed decided talents and unusual energy. His promising career ended suddenly in 1855. When the epidemic of yellow fever broke out in Norfolk in that year, he was among the first to volunteer for service, contracted the disease in a few days, and, in spite of the best nursing care and the attention of two physicians who had been his companions in France, rapidly succumbed.

In April 1853 another medical periodical appeared in Virginia—the *Virginia Medical and Surgical Journal,* published in Richmond and edited by George Alexander Otis and Howell Lewis Thomas. In plan it was not unlike that of its contemporary. After the first year Dr. Thomas resigned and was succeeded by James Brown McCaw. In 1854 Dr. John F. Peebles of Petersburg became coeditor with Dr. McCaw, and Otis became corresponding editor.

Dr. Otis (1830-1881) was a native of Massachusetts. At nineteen he graduated from Princeton College, three years later receiving his M. A. degree. He was a graduate in medicine of the University of Pennsylvania (1851). After foreign study, especially in France, he returned to America and established him-

[3] Resolution adopted by the American Medical Association at the Detroit meeting. Virginia Medical Journal, 1856, v. 7, p. 83.
[4] Stethoscope, 1854, v. 4, p. 427.

self in Richmond. Just before the Civil War he became dissatisfied with his prospects and moved to Springfield, Massachusetts. The war wrought a complete revolution in his life. He became first surgeon of the Twenty-seventh Massachusetts Volunteers. Later he was transferred to the surgeon general's office and was assigned the duty of collecting material for the surgical history of the war. Still later, while curator of the Army Medical Museum, he edited the surgical volumes of that monumental work, *The Medical and Surgical History of the War of the Rebellion,* leaving the third volume incomplete at his death in 1881. He was a foreign member of the Medical Society of Norway and a corresponding member of the Medical Society of Paris.

Dr. Thomas was born May 15, 1824. He was a demonstrator of anatomy in the Medical College of Virginia in 1865 and died of apoplexy in 1879.[5]

Dr. McCaw (1823-1906), son of William R. McCaw, grandson of James Drew McCaw, and great-grandson of James McCaw, all Virginia physicians, graduated in medicine from the University of New York in 1843, having studied under the renowned Dr. Valentine Mott. He returned to Richmond, where as a founder of the Medical Society of Virginia, an editor, a Civil War surgeon, a professor in the Medical College of Virginia, and a practitioner of considerable reputation he carried on well the traditions of his family—"a man of most distinguished presence, magnetic and successful."

In 1853 Thomas Pleasants Atkinson was president of the Medical Society of Virginia. He was a native of Chesterfield County, took his medical degree from the University of Pennsylvania in 1817, established himself in Amelia County, and for many years was prominent in political as well as medical circles. He served in the Virginia legislature, contributed extensively to medical periodicals, and at the time of his death was engaged in preparing an historical account of medicine in Virginia and North Carolina. Due chiefly to his efforts the Medical Society of Virginia in 1853 determined to publish a journal of its own. Dr. Atkinson had himself elected "financial editor," and with six associates—Drs. R. W. Haxall, James Bolton, Richmond A. Lewis, A. T. B. Merritt, Goodridge A. Wilson, and Edward G. Higginbotham—embarked upon the sea of journalism. The *Stethoscope and Virginia Medical Gazette* was purchased from Dr. Gooch by the committee and converted into the organ of the Society. The first number appeared in January 1854 with its name shortened to the *Stethoscope.* The whole-hearted backing of the organization had not been won, and lack of harmony prevailed from the first. It was feared that it might involve the Society in debt and that its competition with private medical journals might engender

[5] Virginia Medical Monthly, 1879-'80, v. 6, p. 336.

bad feeling. The latter contention proved true. "We are utterly opposed to this enterprise," declared the *Virginia Medical and Surgical Journal*.[6] "As a medical journalist we think we have a right to complain that the medical society has selected untried men, and given them an unfair precedence over those who have steadfastly maintained the interests of the profession, and have not feared to embark their personal property in an attempt to elevate its character." Agitation against the new venture continued within the ranks of the state Society. Although those who favored disposing of the journal could not muster enough votes at the annual meeting in 1854, the next year they succeeded, and in April 1855 at the annual meeting of the Society it was "determined, with the consent of the editors, to offer the journal for sale." The editors regarded the decision as due to the strong position the journal had taken in regard to medical reform and the blame it had heaped upon the Medical College for the low medical standards in the state.[7]

The *Stethoscope* was sold at public auction in May or June 1855 by the state Society and was purchased by Ritchie and Dunnavant of Richmond, its former publishers. Drs. Goodridge A. Wilson and R. A. Lewis, two members of the old editorial staff, became sole editors, beginning with the June number, and announced themselves in favor of medical reform.[8] It was soon found, however, that the profession could not support two journals. At the end of the year an amalgamation was effected with the *Virginia Medical and Surgical Journal*. The new magazine appeared for the first time in January 1856 with the title of the *Virginia Medical Journal*. Dr. McCaw became editor, with Dr. Otis as corresponding editor. John F. Peebles' death in December 1855 prevented his expected continuation with the new journal. "Our zealous advisor and colaborer in all the difficulties of the editorial life has left us," wrote Dr. McCaw in the first number of the amalgamated journal, declaring there was "no member of the profession in this state who has won for himself a more enviable reputation."[9]

Dr. Peebles (1815-1855), a native of Dinwiddie County, had practised in Petersburg for sixteen years before his death at the early age of forty. He made many contributions to the medical literature of his time. In 1853 he was awarded the Fiske Fund Prize for a paper on *Displacements of the Uterus* and the next year a prize offered by the Medical Society of Virginia for an essay entitled *Original Views of the Nature and Varieties of Intermittent Fever de-*

[6] December 1853, v. 2, p. 216.
[7] Stethoscope, 1855, v. 5, pp. 256-260.
[8] Stethoscope, 1855, v. 5, p. 329. Virginia Medical and Surgical Journal, 1855, v. 5, p. 68.
[9] Virginia Medical Journal, 1856, v. 6, p. 91.

veloped with the design of more correctly establishing the principles of its treatment. He was the father of Dr. R. S. J. Peebles.[10]

"The offspring of private enterprise," the new *Virginia Medical Journal,* was declared to be "unconnected with any local institution or association" and was designed to be "the independent advocate of the rights and interests of the entire medical public."[11] Enlarged and improved by lithographs and wood engravings it offered the subscriber annually two volumes of eleven hundred pages for five dollars. It completed its eighth volume in 1859, following much the general outline of its predecessors. In 1860 its name was changed to the *Maryland and Virginia Medical Journal* and as such it continued to be published in Richmond. Dr. McCaw and W. C. Van Bibber of Baltimore were editors of the first two volumes. William A. Hammond, well known in Baltimore, joined them in issuing the third and last volume in 1861. The outbreak of the Civil War caused the suspension of the publication. On the whole it was a rather poor journal, aimed at securing the patronage of doctors in two states at a time when interest in medical matters was at a low ebb. Collaborating with the editors were Richard McSherry, Thomas H. Buckler, William T. Howard, N. R. Smith, Samuel Chew, Levin S. Joynes, George A. Otis, Charles Bell Gibson, Francis Donaldson, A. E. Peticolas, C. Johnson, Edward H. White, and J. J. Thweatt.

Meanwhile Drs. Wilson and Lewis, former editors of the *Stethoscope,* had established a journal of their own—the *Monthly Stethoscope and Medical Reporter.* The first issue appeared in 1856, devoted largely to selections from other journals and to exhaustive book reviews. The few original articles were contributed principally by physicians belonging to the faction which had favored a society-owned journal. It ran for at least two years—how much longer is not known.

The *Confederate States Medical and Surgical Journal* was first issued in Richmond in January 1864. It was a natural outcome of a need, long felt in the medical service of the army, for a publication dealing strictly with military medicine. It was published under the authority of Surgeon General Samuel P. Moore, first by Messrs. Ayres and Wade of Richmond, later by Ayres alone, and it appeared each month during the year 1864 and in January 1865—thirteen issues in all. It was largely given over to traumatic surgery. Articles dealt with resections, ligatures, aneurisms, gunshot wounds, gangrene, erysipelas, and tetanus.

[10] Stethoscope, 1854, v. 4, p. 249.
[11] Stethoscope, 1855, v. 5, p. 770.

Following its cessation there was no lag in medical journalism in Virginia. In January 1866 a new journal made its appearance—the *Richmond Medical Journal,* published by Edwin Samuel Gaillard, "Medical Director and Inspector of the late Confederate Army," a man whose editorial zeal carried him in a few years to Louisville and still later to New York. Before his death in 1885 he had founded four medical journals. Associated with him in this his first venture was William S. McChesney, of Staunton, whose son, Jacob Newton McChesney, after graduating in medicine at the University of Virginia and Bellevue Medical College, attained enviable recognition in New York City as sanitary inspector in the contagious disease department of the Board of Health.[12] In spite of the difficulties which faced Drs. Gaillard and McChesney in 1866 the journal which they published was exceptionally creditable. At the outset they announced that they proposed "to cultivate the field of Southern Medical Journalism." Feeling that most American medical journals had come to grief through failure to remunerate their contributors, they proposed to offer ample remuneration for all published manuscript. Avoiding a recognized pitfall of previous journals they assured their readers that "devoted, as this Journal is, exclusively, to the progress and development of Medical Sciences nothing of a personal, political or controversial character will be published in its pages."[13] However, a year had hardly passed before friends of the journal "suggested the imprudence and injudiciousness of unwelcomely criticising corporate Institutions and authors of established reputation."[14] The editors could at any rate be sure that their stand in this matter had not injured their circulation, for they were able to announce that "It is less than one year since the Richmond Medical Journal was first issued, and it is now the largest medical monthly in the United States."[15] In May 1868 the fifth and last volume appeared. The editor moved to Louisville, and although the journal was continued as the *Richmond and Louisville Medical Journal* it was no longer published in Richmond.

Three years elapsed before the *Virginia Clinical Record* appeared in 1871. Described as a monthly journal of medicine, surgery, and the collateral sciences, it was edited by J. S. Dorsey Cullen and published in Richmond. Although its existence was brief—there were but three volumes—one cannot fail to be impressed with its general high tone. In his salutatory the editor declared that "The principal design of the journal . . . will be to record faithfully the current events in medical practice, and thereby to furnish contributions to the medi-

[12] Obituary of Jacob Newton McChesney, Virginia Medical Monthly, 1885-'86, v. 12, p. 514.
[13] Richmond Medical Journal, 1866, v. 1, p. 67.
[14] Richmond Medical Journal, 1866, v. 2, p. 570.
[15] Richmond Medical Journal, 1866, v. 2, p. 570.

cal history of our State for present instruction and future reference."[16] Among the contributors to this journal were L. S. Joynes, Julius L. Powell, Francis D. Cunningham, Isaiah H. White, D. Gregory, O. F. Manson, A. J. Terrell, J. B. McCaw, Hunter McGuire, O. A. Crenshaw, and R. T. Coleman.

John Syng Dorsey Cullen, the editor, son of John Cullen, one of the founders of the Medical College of Virginia, was born in Richmond in 1832. After a careful pre-medical education he was graduated from the medical department of the University of Virginia in 1853. Study in Philadelphia and Europe followed before he returned to Richmond to be associated with that already well-known surgeon, Charles Bell Gibson. At the outbreak of the war in 1861 Cullen entered the military service as surgeon to the First Virginia Infantry, but was soon made medical director of Longstreet's Corps. In June 1862 he became acting medical director of the Army of Northern Virginia and continued in high esteem in various positions till the close of the war. Returning to civil life he was elected professor of diseases of women and children in the Medical College of Virginia in 1868. In 1881 he succeeded Dr. Hunter McGuire in the chair of surgery, and was made dean in 1886. He held membership in the Southern Surgical and Gynæcological Association, the Medical Society of Virginia, of which he was a charter member, and the Richmond Academy of Medicine, of which he was president. His contributions to medical literature were not confined to the short-lived *Virginia Clinical Record,* but are to be found scattered through many contemporary medical journals. He died in 1893, much admired and respected.

Although these early attempts at journalism were creditable, the most important medical journal that has appeared in Virginia was the *Virginia Medical Monthly,* begun April 1874, changed to the *Virginia Medical Semi-Monthly* in April 1896, changed again to the *Virginia Medical Monthly* in January 1918, and as such still issued. Its founder and editor, Landon B. Edwards, continued to maintain it as a private enterprise until 1910. In 1918 the Medical Society of Virginia purchased it for its official organ. The journal was devoted to original articles, analyses, reports of societies, bibliographical reviews, and editorials. In January 1884 William Harvey Coggeshall became half-owner and associate editor. His untimely death from tetanus in September 1885 robbed Dr. Edwards of an unusually promising associate. In August 1894 the publication added to its interest by providing for a department of the eye, ear, nose, and throat under the editorial management of John Dunn of Richmond. Shortly afterwards a department of general surgery was added under Stuart McGuire

[16] Virginia Clinical Record, 1871, v. 1, p. 30.

of Richmond, a department of skin, venereal, and genito-urinary diseases under Bernard Wolff of Atlanta, and electrotherapeutics under R. M. Slaughter of Alexandria.

During its long existence the journal has been a powerful influence for good in Virginia. It warmly supported the state Society in its efforts to organize a state board of health, was enthusiastic in advocating the state board of medical examiners and loyal in supporting it against all critics, and was fearless in exposing what it considered deficiencies in the Medical College of Virginia. In 1884 it asserted that "The College has gone down, in our belief, mostly because the Board of Visitors has not done its duty. Without intention to do wrong but not knowing what to do, on the occasions of their few meetings, they have consulted the Faculty, instead of finding out what was demanded.... until the Faculty....manages the Board."[17]

The journal had no hesitancy in crossing swords with the American Medical Association on a matter of ethics. In 1874 it attacked as unreasonable the association's ruling which, after recognizing "specialties as proper and legitimate fields of practice," declared that "it shall not be proper for specialists publicly to advertise themselves as such" and that "private handbills addressed to members of the medical profession or...cards in medical journals calling the attention of professional brethren to themselves as specialists"[18] were unethical. When the American Medical Association met in Richmond in May 1881, daily editions of the *Virginia Medical Monthly* were an agreeable feature of the session.

In turning the pages of the bound volumes of the *Monthly* one's eye is struck by the frequent references to Hunter McGuire and St. Luke's Hospital and the evident veneration in which the editor held this distinguished man. He also made numerous references to Valentine's Meat Juice, in whose virtues he took particular pride, announcing with satisfaction that "President Garfield has used Valentine's Meat Juice, under the direction of his physicians, with happy results."[19] He was proud of the special notice it received at the Paris Exposition of 1878 and of the unique cabinet of native Virginia woods in which it was exhibited before the American Medical Association. Even a trip to Europe by the proprietor, Mr. Mann S. Valentine, received due notice. The editor seemed to have some relish for publishing the virtues of his favorite proprietary medicines. Lactopeptine he found "of more frequent service in

[17] Virginia Medical Monthly, 1884-'85, v. 11, p. 52.
[18] Transactions of the American Medical Association, 1874, pp. 556, 557.
[19] Virginia Medical Monthly, 1881-'82, v. 8, p. 417.

digestive troubles than any other one remedy." Listerine was welcomed as a new antiseptic: "We commend this convenient and valuable preparation."[20] Mellin's Food was declared to be "without doubt *the* baby's food."[21] All of these preparations were extensively advertised in the journal. Other advertisements which the editor endorsed and commended as "worth perusal" were Beef Peptonoids, Iodia and Bromidia, Cosmoline, Pinus Canadensis, Fellows' Hypo-Phosphites, Maltine, Colden's Liquid Beef Tonic, Avena Sativa, Scheffer's Pepsin, Hyroleine, Tongoline, Bromo-Chloralum, Damiana, Wolf-Trap Water, Celerina, Ayres' Hernia Truss and Bunn's Uterine Supporter.[22] For the lithia waters, particularly those of Virginia, the journal was chronically enthusiastic. Buffalo Lithia was a favorite. Its virtues were declared to have been long recognized by "leaders of medical thought and practice all over the country." Especially valuable was it in affections of the kidneys. "It removes the albuminuria of scarlet fever, and when given as the only drink.....it prevents the nephritic sequel or complication."[23]

An interesting feature of the issues of 1891 are the bicycle advertisements. Editorially the reader was assured that "the day for the mere novelty of the bicycle is over," and that it was fast becoming a popular vehicle for physicians in the North and West.[24]

Landon Brame Edwards (1845-1910) was a medical editor *par excellence.* He was born in Prince Edward County, son of the Reverend John Ellis Edwards and his wife, Elizabeth Agnes Clarke, and studied at Lynchburg Military College and Randolph-Macon College until his enlistment as a private in the Confederate army in 1863. After the war he studied at the Medical College of Virginia, the University of Virginia, and the University of the City of New York (M. D. 1867). After serving an internship in New York City he returned to practise medicine in Lynchburg. He was secretary of the Lynchburg Medical Society from 1868 to 1871 and was one of the founders of the reorganized Medical Society of Virginia, of which he was secretary continuously from its organization to his death, except for one year. Shortly after his marriage to Nanny P. Rucker in 1871 he moved to Richmond, became a member of the State Board of Health (1872-1908), and in 1874 founded the *Virginia Medical Monthly.* He was associated with the Medical College of Virginia as lecturer for several years. When the University College of Medicine was organized

[20] Virginia Medical Monthly, 1881-'82, v. 8, p. 420.
[21] Virginia Medical Monthly, 1884-'85, v. 11, p. 290.
[22] Virginia Medical Monthly, 1883-'84, v. 10, p. 684.
[23] Virginia Medical Monthly, 1888-'89, v. 15, p. 77.
[24] Virginia Medical Monthly, 1891-'92, v. 18, p. 331.

in 1893 he was elected professor of the practice of medicine and remained in the faculty until 1907, serving as dean from 1898. He became emeritus professor of medicine in 1907. He was a member of many medical associations within and without the state and contributed frequently to medical literature through his own journal. Viewed in the large, his influence through the medium of his periodical and in the councils of the Medical Society of Virginia was wholesome and effective. Though at times partisan, he was generally loyal, fair, and vigorous in the matters of importance with which he dealt.[25]

The Southern Clinic, appearing for the first time in October 1878, was a small, unpretentious monthly publication, selling for $1.50 a year, edited and published in Richmond by Clarence Archibald Bryce (1849-1928) and J. R. Wheat. The latter retired from the publication after its third number. It proposed "to give its readers, in each issue, one or two short practical, original articles from prominent gentlemen in the profession, also hospital reports, clinical lectures, and interesting cases from private practice. . . ."[26] William Perrin Nicolson, John N. Upshur, and A. M. Fauntleroy were among the contributors to the first volume, which gave promise of performing a useful service. For forty years Dr. Bryce continued his publication, doing most of the writing and his own printing in his office at 123 East Broad Street. In later years the character of the publication changed somewhat, and it ceased to be regarded in Virginia as a worthy competitor in legitimate medical journalism. This did not, however, interfere with its circulation elsewhere, if we are to credit the statement emblazoned on its first page: "The Southern Clinic has the largest circulation of any medical journal in the South." The editor and proprietor was a unique figure. He was a native of Louisa County, had served in Woolfolk's battery during the war, and was a graduate of Richmond College and the Medical College of Virginia (1871). He continued to practise and write in Richmond for nearly sixty years, dying at his home on North Tenth Street in September 1928. During the greater part of his residence in Richmond Bryce was not on good terms with most of his professional confrères. He declared the Medical College of Virginia, his alma mater, to be "the biggest fraud and sham existing upon paper at this time. The school has neither brains, principle, nor material. It is defunct in every sense of the word, morally and financially." This attitude was attributed by an anonymous writer in the *Labor Herald* to his alleged expulsion from the Medical Society of Virginia, aggravated by the attempt of the College to collect his tuition, which had remained unpaid, the

[25] Obituary, Virginia Medical Semi-Monthly, 1910-'11, v. 15, p. 404.
[26] Southern Clinic, 1878-'79, v. 1, p. 23.

refusal of the College to advertise in his *Clinic* and of the Medical Society of Virginia to give him the printing of its transactions. All of this Dr. Bryce disproved satisfactorily, admitting however, that Dr. Hunter McGuire had moved his expulsion from the Medical Society of Virginia about 1880 on the ground of unprofessional conduct and that he had been allowed to resign. His animosity toward the Medical Society of Virginia, the Richmond Academy of Medicine, the Medical College of Virginia, and his particular enemies in the medical profession seems never to have subsided.

Among his published works were *Medical Advice to Young Men, Bryce's Visiting List, The Physician's Companion,* and *Bryce's Pocket Practice,* whose titles explain their nature and contents. In less serious vein he wrote *The Ups and Downs of a Virginia Doctor, Kitty Dixon,* and *The Gentleman's Dog.* In his own journal and in the *American Journal of Clinical Medicine* no less than ninety-five articles appear over his signature. The range and character of his activities may be judged from the sundry positions he held: president of the Medical Society of the United States (1919-1920), member of the American Medical Editors' Association, and professor of electrosurgery in the Medical College of Electro Therapeutics.[27]

The *Sanitary Monitor* was one of the forerunners of modern *Hygeia.* It was first published in Richmond in 1885 by John Farmer Winn as a monthly journal devoted to individual, family, and public health, and was "designed especially for the instruction of the *laity* in matters pertaining to the preservation of health." The editor explained in an early issue that "while we of course desire the co-operation of physicians in the accomplishment of our aim, we yet reach out toward that larger class whose knowledge of the subject is presumably more limited."[28] "The practical principles of Hygiene in all their relations; ventilation and heating, sewerage, drainage, water-supply, food and beverages in their variable quantities and degrees of purity, with reference to infant as well as adult life; preventable diseases, whether endemic, epidemic or hereditary—their causes and how to restrict them; in fact, the discussion of everything promotive of or opposed to health, will come within the purview of our journal. Recognizing also the necessity for properly trained and skilled nurses for the sick, we purpose to give from time to time articles from acknowledged authorities relating to Nurses—their practical duties and qualifications."[29]

[27] The Bryces were an industrious family, for the little Bryces, with the assistance of their father, published on his press a monthly children's magazine known as the Grasshopper.
[28] Sanitary Monitor, 1885, v. 1, p. 25.
[29] Sanitary Monitor, 1885, v. 1, p. 11.

The Sanitary Monitor

A MONTHLY JOURNAL

DEVOTED TO

INDIVIDUAL, FAMILY AND PUBLIC HEALTH.

Hygiene aims at rendering Growth more perfect,
Decay less rapid, Life more vigorous, Death more remote.
—*Parkes.*

VOL. I. RICHMOND, VA., MAY, 1885. No. 1.

J. F. WINN, M. D., EDITOR AND PROPRIETOR.

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Title page of a Virginia medical journal.

As the only publication of its kind in the South, Dr. Winn's journal had every assurance of success. *Weak Sight as the Result of Insufficient Light in Our Schools,* by Charles M. Shields of Richmond, and *Inhumation and Cremation Compared,* by J. Edgar Chancellor of the University of Virginia, were typical of the articles that it carried, though most of the contributors were from outside the state. The venture was short-lived. With the sixth number of the second volume the editor abandoned the undertaking. On November 27, 1886 he wrote the surgeon general: "In reply to your favor of the 26. inst asking if the Sanitary Monitor has been discontinued, I beg to say it has. I found out that the people as a whole did not appreciate such literature and the profession did not support a sanitary publication alone. I hope to have the pleasure of mailing to yr address next week the first no of *'Practice.'* "

True to promise, *Practice; the Journal for the Busy Doctor; Pointed, Practical, Progressive,* made its appearance in December 1886, and for fifteen years Dr. Winn continued as editor and proprietor of this successful publication. In 1894 its name was changed to the *Richmond Journal of Practice* and as such it continued through 1901. *Practice* was a sketchy publication of about twenty-five pages, with two or three short original articles, but chiefly devoted to short excerpts from current literature. Here, in brief form, appeared the subjects about which the medical thought of the last decade of the Nineteenth Century revolved: appendicitis, perityphlitis, diphtheria; the old ether-chloroform controversy; new remedies warmly welcomed by an age not yet given over to therapeutic nihilism. The journal discussed aristol, hydrogen peroxide, and the coal tar products; Dr. Bidder's cure of boils by injecting carbolic acid; Bergeon's rectal injections of sulphuretted hydrogen for pulmonary tuberculosis; carbonate of lime in the treatment of cancer; sawdust as a material combining all the desiderata for a wound dressing; the virtues of Kelly's surgical and obstetrical pad; Dr. R. M. Slaughter's experience with antifebrin, which he used "quite extensively as an antipyretic in remittent, typhoid and typho-malarial fevers.....from 12 to 15 grains in two doses, at an interval of one to two hours, whenever the temperature rose to or above 103 degrees;"[30] Dettweiler's treatment of consumption, based upon a liberal use of fresh air and rich diet, with a little alcohol, massage, and compressed air thrown in. Here and there a little humor was allowed to creep in. Specifications for a physician's clothes suggested by the journal were: "Four outside pockets in vest, one for gold watch, another for quinine in oval case, a third for hypodermic syringe, fever thermometer, caustic holder and lead pencil, and the fourth for tongue depres-

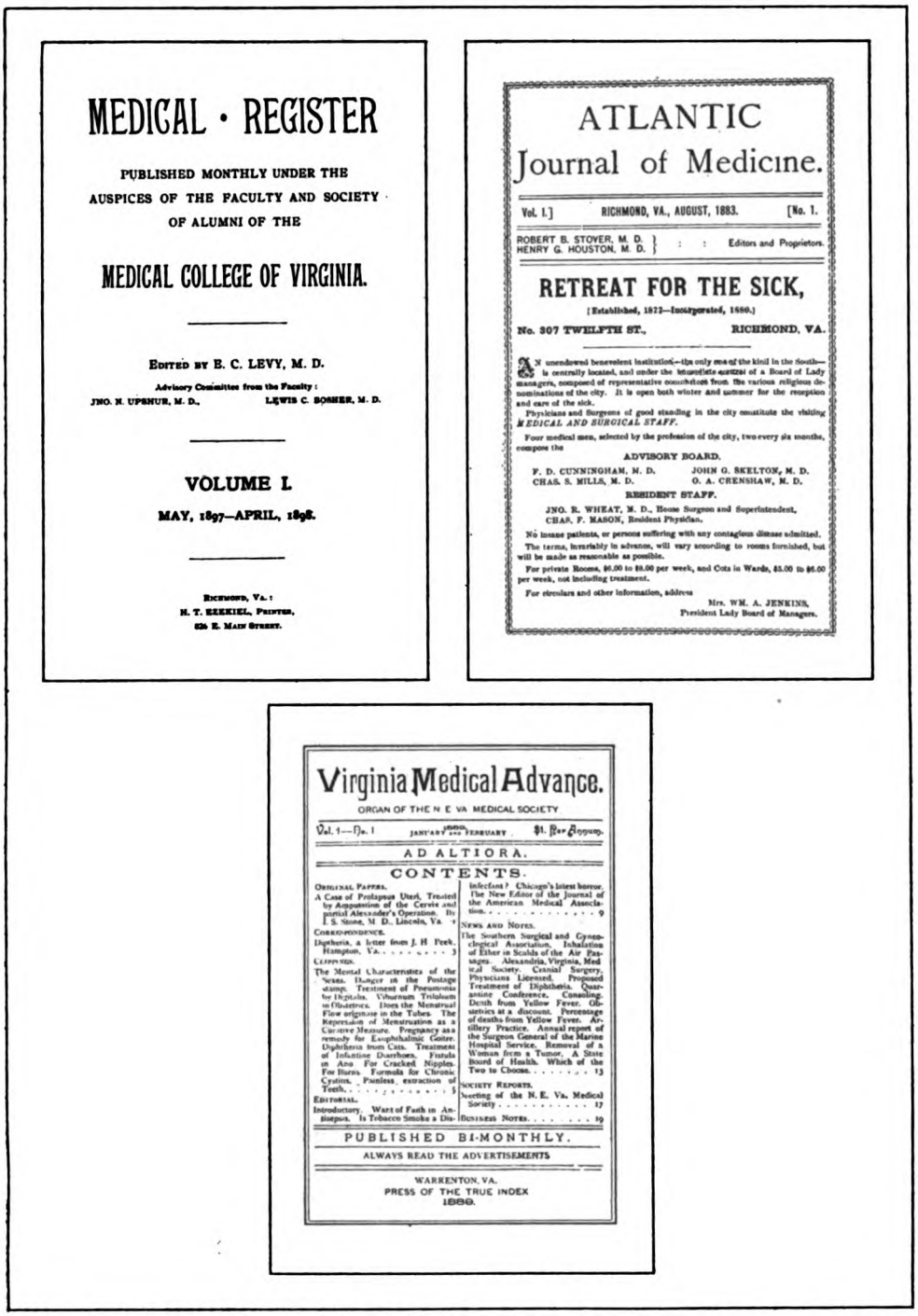
[30] Practice, 1887, v. 1, p. 401.

sor and ophthalmoscope. In dress coat he should have two pockets; one for stethoscope, pleximeter and hammer, and the other for visiting list. The pants should have four pockets; 1, for cash, 2, for physician's knife; 3, for pocket instrument case; and 4, for clean pocket handkerchief."[81]

Dr. Winn (1851-1915) was a native of Winnsville, Fluvanna County. Educated at Fluvanna Institute, he tried teaching for a few years, gave it up to enter medicine, and received his M. D. degree from the University of Virginia in 1875. A few years of general practice in Fluvanna were sufficient to convince him that his talents and tastes lay in a different direction. Choosing obstetrics as a specialty he spent some time in Philadelphia and New York City, and about 1885 he established himself in Richmond. In 1893 he began to lecture on clinical and operative obstetrics in the University College of Medicine, was later made professor of clinical obstetrics, and in 1913, when the two schools united, was chosen to head the department of obstetrics and gynecology. He was obstetrician to both the Virginia and Memorial Hospitals and established the first free obstetrical dispensary in Richmond. His contributions to medical literature are limited to subjects in his particular field—the treatment of eclampsia, prophylactic care of the breast, the technique of forceps delivery, and surgical intervention, a term which he is said to have used for the first time as a substitute for "interference." He was an associate foreign member of the Société française d'hygiène.[82]

The presence of two other medical journals in Richmond in 1883 did not deter Robert B. Stover and Henry G. Houston from attempting a third. The first issue of the *Atlantic Journal of Medicine* appeared in August 1883, and the last in February 1885. Dr. Stover retired after the publication of the first volume, and Dr. Houston was left sole editor and proprietor until ill health caused him to abandon the project. The suspicion, which existed as soon as its publication was rumored, that the journal was the organ of the Medical College of Virginia was confirmed no doubt by the position it took during the political commotion that rocked the institution about this time. It protested against "the interference of any political power, now or at any other time, with this or any other institution," and thereafter had a hard time living down the reputation of being published "solely in the interests of that institution."[83] During the journal's brief life very few original articles appeared in its pages, and there is every evidence that it lacked local support.

[81] Practice, 1888, v. 2, p. 294.
[82] Obituary, Virginia Medical Semi-Monthly, 1914-'15, v. 19, p. 519.
[83] Atlantic Journal of Medicine, 1883, v. 1, pp. 70, 72.



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ROBERT B. STOVER, M. D.
HENRY G. HOUSTON, M. D. } : : Editors and Proprietors.

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Vol. 1—No. 1 JANUARY AND FEBRUARY $1. Per Annum.

AD ALTIORA.

CONTENTS.

PUBLISHED BI-MONTHLY.

ALWAYS READ THE ADVERTISEMENTS

WARRENTON, VA.
PRESS OF THE TRUE INDEX
1889.

Title pages of Virginia medical journals.

In 1889 the Northeast Virginia Medical Society attempted a publication known as the *Virginia Medical Advance.* It was published every two months at Warrenton, edited by H. M. Clarkson, managed by Thomas W. Smith, and sold for one dollar a year. This interesting tabloid medical journal survived six numbers of volume one, featuring the principal articles read by members of the sponsoring society. It expired for reasons set forth by the editor in his last issue: "Our editorial connection with the Virginia Medical Advance ends with this issue. Under many disadvantages—chiefly our distance from our office of publication, the miscarriage by mail of our manuscript, our scarcity of exchanges, our pre-occupation in the active discharge of arduous duties of public office, and by no means least, the foundering of the medical association, of which we were the appointed organ—we have been able to give to the public the number of issues promised. We admit our dilatoriness; and we regret it. We blame no one for our want of promptness . . ." The Northeast Virginia Medical Society, wrote the editor, "has long since melted away from want of cohesive affinity among its fellows . . . . ," leaving the journal "an organ without a body."[84]

Toward the end of the century the competing medical colleges in Richmond almost simultaneously saw the advantage of having medical publications under their control to give fuller expression to the literary output of their respective faculties. First in the field was the *Bi-Monthly Bulletin of the University College of Medicine.* This small publication was begun in 1896 and, running through the remaining years of the century until 1907, contained editorials, brief original articles by physicians, dentists, and pharmacists, and short excerpts from the lectures of the professors—words of professorial wisdom.

The old college was forced to match this bit of propaganda with a publication of its own, the *Medical Register,* started in 1897. Edited by E. C. Levy, it was "published monthly under the auspices of the Faculty and Society of Alumni of the Medical College of Virginia" for three years, each volume containing about five hundred pages. The editor was assisted by an advisory committee of the Faculty—J. N. Upshur and Lewis C. Bosher for the first two volumes, William H. Taylor and Robert F. Williams for the last volume. The articles were short and rather numerous, often reprinted from other sources.

[84] Virginia Medical Advance, November and December, 1889.

CHAPTER VII

THE PROGRESS OF MEDICINE AND SURGERY

GENERAL MEDICINE

THE steady inroads of specialism in recent years, with the multiplication of experts in diseases of the eye, ear, nose, throat, heart, lungs, and nerves, and the gastro-intestinal, genito-urinary and other systems, seriously threatens to undermine the position general medicine occupied in the Nineteenth Century. It was then a wide and challenging field. In 1847 Horatio C. Wood declared that it embraced "all those branches of medical science with the exception of midwifery and surgery which have a direct reference to the knowledge and treatment of disease."[1] In 1873 Austin Flint asserted that medicine "comprehends everything pertaining to the knowledge and cure of disease . . . the term is used in contradistinction to Surgery and Obstetrics."[2] One has only to follow systematically the development of medicine in Virginia during this century to appreciate the vast changes in theory and practice which made this the most momentous period in all medical history.

1800-1810

The first decade of the Nineteenth Century witnessed at least two important innovations in American medical practice. Jennerian vaccination, introduced into England in 1798, was almost immediately put to the test in this country. The influence of Benjamin Waterhouse in New England and of Thomas Jefferson in Virginia hastened the general recognition of its superiority over inoculation. Jefferson not only lent the weight of his position as President of the United States at a time when the procedure was still *sub judice* but personally supplied virus to would-be vaccinators. He did not forget the physisians of his own state and as an object lesson vaccinated with his own hands his slaves at Monticello.[3] During this period two publications on the subject came from Virginia—John Spence's *Observations on the Inoculation of the Kine-Pock,* 1802,[4] and William Foushee, Jr.'s *Letter on the Efficacy of Vaccination,* 1808.[5]

[1] Wood: Practice of Medicine, 1847, p. 2.
[2] Flint: Principles and Practice of Medicine, 1873, p. 2.
[3] Blanton: Medicine in Virginia in the Eighteenth Century, pp. 193, 194, 196.
[4] Medical Repository, v. 5, p. 381. The article consisted of Spence's correspondence with Benjamin Waterhouse.
[5] Philadelphia Medical Museum, v. 6, p. 31.

American medical journalism is the second important innovation of this first decade. Prior to 1797 there were no medical periodicals published in this country. Year by year since that time the number has steadily mounted until today there are more than six hundred. Virginia physicians were quick to take advantage of the new medium of expression, and many of the early articles appearing in the *Medical Repository* of New York were the products of their pens. During the first ten years of the century no less than thirty-one articles were contributed by Virginians to the *Medical Repository,* the *Philadelphia Medical and Physical Journal,* the *Philadelphia Medical Museum,* and the *Baltimore Medical and Physical Recorder.* Besides the chief contributors—John Spence of Dumfries and Peachey Harrison of Harrisonburg—there were Robert Burton of Bent Creek, B. H. Hall of Alexandria, Robert Dunbar of Winchester, James Lyons of Richmond, James Greenway of Dinwiddie, James Taylor of Norfolk, Thomas W. Smith of Loudoun, Thomas R. P. Spence of Accomac, James W. Wallace of Fauquier, Daniel Wilson of Richmond, and Elisha C. Dick of Alexandria. From these articles it is evident that fevers, puzzling as to origin, classification and treatment, were uppermost in the minds of the Virginia physician—yellow fever, intermittent fever, and remittent fever constitute a third of the subject matter of the contributions. Other favorite subjects were chorea sancti viti, epilepsy, cynanche trachealis, and digitalis in the treatment of tuberculosis. Reading through these and other titles it is apparent that for the most part the profession was thinking and practising in the same way it had thought and practised for the past hundred years.

In 1805 Robert Burton described a *Case of Hydrophobia successfully treated by copious Bleeding and the Use of Quicksilver* and was complimented by the great Dr. Rush on his "rare triumph" and the "boldness of your practice."[6] Dr. Schoolfield of Portsmouth in 1809 reported a singular conversion of disease, in which intermittent fever turned into "erysipelatous inflamation of the leg."[7] Even the illustrious John Augustine Smith, afterwards president of the College of Physicians and Surgeons of New York, reported *A Case of Mortification arrested by . . . Blisters;* and *The Efficacy of Blisters in preventing and curing Gangrene* was the subject of a contribution by John Floyd of Christiansburg.[8] Two of the seven articles contributed by Virginians to

[6] Medical Repository, 1805, v. 2, p. 15.
[7] Medical Repository, 1809, v. 12, p. 236.
[8] Baltimore Medical and Physical Recorder, 1809, v. 2, p. 75. Philadelphia Medical and Physical Journal, 1808, v. 3, p. 256.

medical journals during the next decade of the century dealt with the use of blisters, in both cases advocated as applications to the neck in epistaxis.

A docile public accepted these drastic measures. A letter from Mrs. E. B. Kennon to Miss Ellen Mordecai, in December 1813, reads: "The Docr. still talks of blisters, my Ellen; but as long as the Congress and Constellation are safe in Port 'I will laugh in care's face' and tho' blistered, bled, dosed with salts every night etc. etc. etc.; I will feel merry and happy." On another occasion she wrote: "I was putting on a wrapper in order to submit my fair arm to the lancet: my feet had before been inspected by a young Rushite, was not that dreadful? . . . . . and now after losing nearly a quart of blood . . . in spite of lame feet, and painful ankles: I am as gay as a young heir. . . ."[9] About the same time Dr. Robert H. Rose, prescribing for Betty, a slave belonging to Mrs. Scott of Orange, who had "a Tetter" which he feared would "be very difficult to cure" recommended calomel and a powder of his own compounding three times a day in a tablespoonful of sassafras tea. He thought "she ought to take Burdock concoction every day at least a pint." This was to be prepared by boiling "two ounces of Burdock root and three ounces of iner bark of sassafras" in three pints of water until it was reduced to two.[10]

1810-1870

During the succeeding four decades, 1810-1850, there is little evidence of medical progress in Virginia. From the one or two articles by Virginians appearing each year in the Northern medical journals we gather that between 1810 and 1830 the profession was chiefly concerned with epidemics, particularly the great "winter epidemics" of 1812, 1813, 1814, and 1815; with the fevers; with the best way to apply the leech; with the technique of cupping; with the therapeutic properties of *diospyros Virginiana* (persimmon), tartar emetic, Brocchieri water, mercurial ointment, and creosote; with erysipelas, consumption, apoplexy, rheumatism, and gout. For the most part they were concerned with the same old subjects dealt with in the same old way. Peachey Harrison of Rockingham County reported several cases of bronchitis in 1823. This is the earliest record of the recognition of this clinical entity in Virginia[11]—fifteen years after Charles Badham's treatise, in which the term was used for the first time, and three years before Laënnec's classic description of the disease. In all this period one sees no record by Virginians of nephritis as described by Bright

[9] Virginia Magazine of History and Biography, 1927, v. 35, pp. 19, 287.
[10] Virginia Magazine of History and Biography, v. 28, p. 363.
[11] Philadelphia Journal of Medical and Physical Sciences, 1823, v. 7, p. 310.

in 1827, of typhoid as differentiated by Gerhard in 1837,[12] or of exophthalmic goitre as described by Basedow in 1840.

A letter from James Monroe to Dr. Charles Everett of Albemarle County, dated November 13, 1823, although written by a layman, reveals much concerning the medical practice of the day. Dr. Everett is informed that "Mrs. Monroe has been much indisposed, & untill lately the cause, has not been distinctly understood, if indeed it now is. Debility of the stomach was first supposed to be the complaint & in consequence stimulants were given her, which produced an injurious effect—Bile was then presumed to be the leading cause & in consequence calomel was given her in strong doses, but without removing the complaint, even in checking the interment [intermittent?] form, or chill. The quinine, would not remain on her stomach, a moment nor anything else. Since our return here, for which she made a great exertion, it has been thought by Dr. Huntt, who has attended her in the absence of Dr. Washington that the Erysipelas by fixing on her stomach, was her complaint, & in consequence he has made an effort to draw it to the surface, by tartar emetic plaisters, in which he has succeeded, & by the aid of Jennings's steam bath, he has also checked the chill, and perhaps stopped it, as she has escaped it for several days. She likewise now takes the quinine, & drinks porter, in small quantities, which remain on her stomach. Still her nerves are very much affected, she has little appetite, frequent fevors & is very weak, so that we cannot say with any confidence that she is convalescent."[13]

The years from 1850 to 1860 offer a great contrast. In 1851 the *Stethoscope and Virginia Medical Gazette* was first published in Richmond, initiating a long series of medical publications that crowd rapidly after one another until the end of the century. The advent of a native medical journal acted as a tremendous stimulus to authorship in Virginia, and during the next ten years more articles were contributed by Virginians to medical periodicals than in the entire preceding half century.

The very title of Virginia's first medical journal is indicative of one advance in medicine, namely the appreciation of the value of the stethoscope in diagnosis, and the first volume carried an article by Robert W. Haxall of Richmond entitled *Pathological and Diagnostic Excerpts, in which the value of Physical*

[12] Alexander Somervail in 1823 (On the Medical Topography and Diseases of a Section of Virginia, Philadelphia Journal of the Medical and Physical Sciences, 1823, v. 6, p. 276) distinguished continued fever from malaria; and John Peter Mettauer, writing in 1843 (Practical Observations on Continued Fever, etc., American Journal of the Medical Sciences, 1843, v. 6, p. 33) plainly showed his familiarity with typhoid as an entity. The name was not given to the disease by Louis until 1829.

[13] Tyler's Quarterly, v. 5, p. 21.

Signs is enforced.[14] L. S. Joynes of Richmond published *Observations on Obstetrical Auscultation* in 1845.[15] In 1851 P. H. Cabell, writing on *Auscultation and Percussion,* stated that the stethoscope "is now always employed in diagnosticating valvular diseases of the heart . . . . It can be used also without offending the modesty of females to whose bosoms it is not always seemly to be putting our faces."[16] In investigating the heart the author preferred the flexible stethoscope of Dr. Pennock. He refers to the binaural instrument, invented about this time by G. P. Cammon of New York. It is unlikely that the stethoscope was as yet employed by more than a small proportion of the profession. No mention of it is made in the Harvard medical catalogues until 1868-1869,[17] but in 1866 Professor David H. Tucker was lecturing on auscultation of the heart to his classes at the Medical College of Virginia.[18]

The first reference to typhoid fever by name in Virginia occurred in 1851. In this year John P. Little of Richmond published an *Abstract of an Essay on Typhoid Fever.*[19] From this time on, no subject was so popular in the state, and before 1860 no less than seventeen articles dealing with it were published. There was also an awakened interest in epidemic diseases, particularly in yellow fever, which wrought such havoc at Norfolk in 1855. Quinine, isolated in 1819 and probably long employed in Virginia, was another popular theme.

The first reference to the term, diphtheria, in Virginia occurs in 1856 in Charles Minor's *Cases of Diphtherite;*[20] the next was in R. W. I'Anson's article on *Diphtheria*[21] in 1861, followed by Edwin W. Le Cato's *Report of Diphtheria as it Prevailed in Accomac County in 1863.*[22] Throughout the first half of the century the terms "croup" and "putrid sore throat" were frequently used by Virginia writers to describe what must often have been diphtheria, although in many instances acute laryngitis and streptococcic infections of the throat were the conditions dealt with. Carter P. Johnson's *Tracheotomy in Croup,* first published in 1851, received favorable contemporary comment.[23]

[14] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 421. Haxall had won the Boylston prize in 1836 with an essay on physical signs, Laënnec's Traité de l'Auscultation Médiate was published in 1819, William Stokes' Introduction to the Use of the Stethoscope in 1825, and Joseph Skoda's work on Percussion and Auscultation in 1839.
[15] American Journal of the Medical Sciences, 1845, v. 9, p. 89.
[16] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 361.
[17] Garrison: History of Medicine, p. 778.
[18] Richmond Medical Journal, 1866, v. 1, p. 1.
[19] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 95.
[20] Virginia Medical Journal, 1856, v. 6, p. 100. Minor was from Charlottesville.
[21] Maryland and Virginia Medical Journal, 1861, v. 16, p. 16.
[22] American Journal of the Medical Sciences, 1865, v. 50, p. 44.
[23] Stethoscope, 1851, v. 1, p. 670; American Journal of the Medical Sciences, 1852, v. 23, p. 285.

The treatment of rheumatism with citrous fruits was advocated by Robert H. Cummings of Wheeling in 1852,[24] and iodine as a cure for goitre was described by C. H. Harris of Buckingham in 1854.[25]

After this there came the great hiatus in progress occasioned by the Civil War. The medical profession of Virginia awoke from post-war lethargy in 1870, reorganized the Medical Society, and again became active contributors to medical literature.

1870-1880

O. F. Manson's article on *Clinical Thermometry* in 1871[26] takes us back to the time when the now familiar procedure of taking the temperature was infrequently resorted to, and then only with difficulty. The clinical thermometer did not come into general use until about 1870. It was an enormous instrument, about ten inches in length, which required at least five minutes to register the axillary temperature. Sir Lauder Brunton declared it was so large and clumsy that one was tempted to carry it under the arm "as one might carry a gun."[27]

The chief subject for consideration before the Medical Society of Virginia in 1871 was inflammation. Henry Latham's part in the discussion is interesting. He refers to his own study of the process in the mesentery of the frog, and records observing under the microscope the central current of erythrocytes, the peripheral arrangement of the leukocytes, the slowing of the current, the diapedesis of the leukocytes, and the wandering of these cells to the site of injury. It was the theory elaborated by Cohnheim ten years before. Latham believed that pus was made up chiefly of "degraded white corpuscles." After referring respectfully to Virchow's contribution to our knowledge of the subject,[28] he concluded by admitting that the profession was in a "transition stage" in regard to blood-letting but that for his part he favored expectant and supporting treatment. In the general discussion which followed, it was evident that the old humoral pathology of Hipprocrates, Sydenham, and Rush was being fast cast into the discard and that most Virginia physicians were already advocates of the new school of Virchow and Cohnheim. Those who participated in the discussion were A. M. Fauntleroy, Gabriel McDonald, W. W. Parker, D. A. Langhorne, W. F. Barr, and A. G. Tebault.[29]

[24] American Journal of the Medical Sciences, 1852, v. 24, p. 397.
[25] Stethoscope, 1854, v. 4, p. 689. Coindet showed the value of iodine in the treatment of goitre in 1820.
[26] Virginia Clinical Record, 1871, v. 1, p. 33.
[27] Garrison: History of Medicine, p. 778.
[28] Virchow's Cellular-Pathologie, 1858.
[29] Transactions of the Medical Society of Virginia, 1871, pp. 101-116.

In 1874 an informing article appeared by William C. Dabney of Charlottesville on the *Development of Connective Tissue.* After tracing the process in the embryo, in the formation of cicatricial tissue, and in certain types of neoplasms, he arrives at the conclusion that the white fibrous element of connective tissue is "*certainly* produced by the elongation and splitting up of the formative cells." It is evident that Dr. Dabney was in the habit of using the microscope, and his paper supports the belief that he was one of the first microscopists as well as one of the earliest students of histology in the state.[80]

In 1876 S. W. Carmichael of Fredericksburg called attention to the fact that it had recently been demonstrated that herpes zoster was due to an inflammation of the ganglion of the posterior roots; that alcohol had a limited use as a medicine (chiefly as a cardiac stimulant); that cold bathing was a good antipyretic; and that the knowledge of cerebral localization was gaining ground. "Much has been written upon the germ theory of disease," he stated, "and it is still undetermined whether germs are the originators or only carriers of the poison."[81]

In 1877 J. S. Apperson of Town House, after alluding to the cold bath in treatment, declared that in view of the new interest in zymotic diseases the etiology of typhoid was everywhere the subject of study and that the possibility of a living organism as a cause was engaging the attention of the medical world generally.[82] He speaks also of a new interest in leukemia.[83]

About the same time John R. Page discusses the epidemic zymotic diseases of animals—contagious pneumonia of cattle, rinderpest, foot and mouth disease, epizooty, distemper in dogs, Asiatic cholera, hog cholera, Texas fever, glanders, and blind staggers.[84] He reflects the interest in veterinary science which the English physician has always exhibited, but which is still strangely lacking in American medicine.

The wider use of the hypodermic syringe and the curability of tuberculosis were among the other subjects before the medical profession of Virginia during this period. The first reference to diabetes mellitus appeared in 1853, when John F. Peebles of Petersburg described it as one of the complications of a case of fatal cerebral disease. In 1873 C. Watson Doyle of Dinwiddie wrote upon the treatment of diabetes. Besides restricting sugar, he based his therapy

[80] Transactions of the Medical Society of Virginia, 1874, p. 37.
[81] Transactions of the Medical Society of Virginia, 1876, p. 73.
[82] Elberth isolated the organism in 1880.
[83] Transactions of the Medical Society of Virginia, 1877, p. 189. First reported by Virchow in 1845.
[84] Transactions of the Medical Society of Virginia, 1877, p. 253.

upon Mialhe's discovery of the deficiency of certain alkaline salts in diabetic blood.[35]

An international interest in public health began about the middle of this decade. The Public Health Act in England was passed in 1875. An International Hygienic Congress was held at Brussels in 1876, and another at Paris in 1878. James L. Cabell of Charlottesville, one of the originators of this movement in America, in an investigation of defective drainage as a cause of disease, circulated an elaborate questionnaire throughout Virginia and published a report of his findings in the *Transactions of the American Medical Association* in 1874.[36] In another comprehensive and carefully prepared report on hygiene and public health in 1876 he discussed before the Medical Society of Virginia drinking water, meteorological states, the purity of air, and the effects of excessive exercise and food in relation to disease. Knowing little of the importance of humidity and motion in the air, he made too much of the dangers of the products of respiration and sewage emanations, but his references to the harmful effects on the heart of "athletic exercises lately coming into vogue in this country" are extremely interesting.[37]

Addressing himself to the same subject L. S. Joynes the next year showed the growing recognition of the significance of the germ theory, dwelt upon the importance of milk as a conveyor of disease, and developed at length the proper methods of sewage disposal.[38] A discussion of food poisoning by J. S. Wellford,[39] and of health resorts and the influence of climate on health and disease by several others shows how health-minded the age was becoming. A committee composed of W. W. Parker of Richmond, D. W. Lassiter of Petersburg, and R. S. Hamilton of Staunton, in a serious report *On the Effects of the Use of the Sewing Machine upon the Health of Women,* concluded "that the machine may be used for four or five hours daily in a family by a lady in ordinary health without injury."[40]

It was a period of elaborate epidemiological studies, carried out under the ægis of the Medical Society. The ghost of old Sydenham seemed to be abroad, for the temperature, the character of the soil, the prevailing winds, the topography, hydrography, petrology of the various divisions of the state were carefully considered in relation to the spread and conveyance of contagious diseases. Malaria and typhoid fever were regarded as chief offenders,

[35] Virginia Clinical Record, 1873, v. 3, p. 137.
[36] Transactions of the Medical Society of Virginia, 1875, p. 71.
[37] Transactions of the Medical Society of Virginia, 1876, p. 95.
[38] Transactions of the Medical Society of Virginia, 1877, p. 201.
[39] Transactions of the Medical Society of Virginia, 1877, p. 244.
[40] Transactions of the Medical Society of Virginia, 1872, p. 153.

and the principal investigations were directed toward them. Alban S. Payne of Fauquier,[41] Alfred G. Tebault of Princess Anne, James D. Galt and Thomas B. Ward of Norfolk,[42] D. A. Langhorne of Lynchburg, J. F. Fauntleroy of Leesburg, J. C. Green of Danville[43] were active in these studies and prepared readable and interesting reports, but in the absence of the knowledge of the bacterial cause of these diseases most of their work was of ephemeral interest.

1880-1890

This period between 1880 and 1890 was the great period of bacteriological advance. Never before or since in so short a time have so many facts been brought to light bearing upon the cause and treatment of disease. The isolation of the staphylococcus and streptococcus by Pasteur, of the typhoid bacillus by Eberth, of the cholera and tubercle bacillus by Koch, of the glanders bacillus by Loeffler, of the diphtheria bacillus by Klebs, of the tetanus bacillus by Nicolaier, of the colon bacillus by Escherich, of the meningococcus by Weichselbaum and of the coccus of Malta fever by Bruce—all occurred in this decade. As a whole the Virginia profession was well aware of the fact that it was an age of dazzling bacteriological progress. G. William Semple of Hampton stated in 1880 that he regarded the doctrine of a *contagium vivum* as established.[44] Martin L. James of Richmond wrote in 1882 on *Treatment of Consumption Indicated by the Discoveries of Koch and others of its Parasitic Origin,* and suggested the possibility of inoculating for tuberculosis, as in smallpox.[45] John S. Apperson of Marion in 1886 was convinced that "the microbe has come to stay" and that the profession was on the eve of a great departure from old landmarks in prophylaxis, etiology, and treatment. M. A. Rust of Richmond pointed out in 1884 that the germs of typhoid and typhus fever were distinct, and was convinced that there was no such clinical entity as typho-malaria, believing "that zymotic diseases are little prone, as the gardener would say, to sport or to generate hybrids."[46] In 1885 Rives Tatum of Harrisonburg, I. S. Stone of Lincoln, and Jacob Michaux of Richmond, after affirming faith in the bacteriological cause of cholera, tuberculosis, and typhoid fever, expressed their belief that the organism identified by Sternberg was the cause of pneumonia.[47] This was a year before Fränkel and Weichsel-

[41] Transactions of the Medical Society of Virginia, 1872, p. 45.
[42] Transactions of the Medical Society of Virginia, 1872, p. 75.
[43] Transactions of the Medical Society of Virginia, 1873, p. 95.
[44] Transactions of the Medical Society of Virginia, 1880, p. 175.
[45] Virginia Medical Monthly, 1882-'83, v. 9, p. 79.
[46] Transactions of the Medical Society of Virginia, 1884, p. 116.
[47] Transactions of the Medical Society of Virginia, 1885, p. 173.

baum established beyond question that the pneumococcus was the etiological factor in the great majority of cases of lobar pneumonia.

However, not all the profession in Virginia viewed these discoveries with such clarity and understanding. In 1883, discussing diphtheria, S. B. Morrison of Rockbridge stated that he believed the germs of diphtheria and typhoid were the same.[48] Alexander Harris of Culpeper, writing on typhoid fever in 1883, expressed the opinion that some country doctors still would not admit the disease was contagious and that even the respected Bedford Brown of Alexandria still believed that typhoid might be generated spontaneously within the system.[49] Even William C. Dabney, discussing Koch's alleged discovery of the tubercle baccillus the year before, declared there was "great doubt whether the baccilli have any specific relation to the development of tuberculosis."[50] S. K. Jackson, although recognizing "Koch's great discovery," was of the opinion that "the germ theory of disease is yet too new to have received that accurate study necessary to a nice selection of germicides. The remedies are probably as numerous and varied as the organisms we wish to destroy."[51] These reservations reflect somewhat the reception of Koch's discovery elsewhere in the United States. In spite of the publicity given it in the daily papers and the immediate (1883) confirmation of Koch's findings in this country by T. Mitchell Pruden of New York, the profession was too firmly wedded to the belief in a "diathesis or a constitutional state that predestined certain individuals to death from tuberculosis"[52] to accept the full import of the discovery, and "so long as the contagiousness of the disease remained a doubtful issue preventive measures played a minor part."

Pasteur's treatment for hydrophobia was slow in gaining headway in Virginia. A year after his successful treatment of the Alsatian boy, Joseph Meister, John S. Apperson asserted before the Medical Society of Virginia that the method was still *sub judice*, and in 1888 W. S. Hooper of Bedford expressed grave doubts of the efficacy of the method. There was positive antagonism in some quarters. Landon B. Edwards was stirred to editorial criticism by the claims and the advertising of the Pasteur Institute of New York. "We look upon it as a fortunate escape that none of those subjected to experimentation or inoculation died," he wrote. "Such an Institute . . . . . is useless." He went on to express his conviction that many had been led "to fear they had hydro-

[48] Transactions of the Medical Society of Virginia, 1883, p. 183.
[49] Virginia Medical Monthly, 1883-'84, v. 10, p. 20.
[50] Transactions of the Medical Society of Virginia, 1883, p. 149.
[51] Transactions of the Medical Society of Virginia, 1883, p. 75.
[52] Landis, H. R. M.: The Reception of Koch's Discovery in the United States, Annals of Medical History, 1932, v. 4, pp. 535, 536.

phobia, who most probably would not have left their work at home had not the influence of suggestion of danger of the disease been impressed upon them by the advertisements."[53]

Weir Mitchell introduced his rest cure in 1875. In 1884 I. S. Stone of Lincoln, Virginia, reported his own success in the management of nervous women, employing seclusion, forced feeding, rest, massage, and electricity.[54]

The first reference to gastric ulcer in Virginia occurred in 1883, when Landon B. Edwards and Edward T. Robinson of Richmond wrote separately upon the subject.[55]

Prominent among other new ideas was the growing appreciation of the fact that scrofula was disappearing, that locomotor ataxia was due to syphilis, and that tetanus was caused by a bacillus found normally in the soil.

The Virginia doctor was prompt to appropriate the many new therapeutic agents which the decade introduced. In 1880 Charles R. Cullen of Hanover reported his experience with viburnum prunifolium for uterine bleeding, rhamnus Purshiana for constipation, and petroleum in tuberculosis.[56] Between 1884 and 1886 silver nitrate, salol, sulphonal, cocaine, antipyrin, and acetanilid were introduced. The virtues of two in particular—cocaine and antipyrin—were extolled before the Medical Society of Virginia in 1885, and subsequently many articles on their uses appeared in the Virginia journals. Attention was again directed to the alkaloids. O. F. Manson published in 1881 an exhaustive article on the action of quinine,[57] in which he stated that its use had become popular in America about 1823; and G. William Semple was an advocate of quinine hydrobromide administered hypodermatically in the treatment of malaria.[58]

1890-1900

One of the most important developments of the last decade of the century came as an extension of Pasteur's theory of attenuated viruses. In 1890 Emil von Behring, working in Koch's Institute, showed the therapeutic value of the serum of animals immunized against diphtheria toxin, and by 1894 this serum was produced on a large scale. In 1895 a Virginia medical journal stated editorially that Parke, Davis & Co. could supply diphtheria antitoxin on de-

[53] Virginia Medical Monthly, 1890-'91, v. 17, p. 671.
[54] Transactions of the Medical Society of Virginia, 1884, p. 103.
[55] Virginia Medical Monthly, 1883-'84, v. 10, p. 771. Atlantic Journal of Medicine, 1883, v. 1, p. 424.
[56] Transactions of the Medical Society of Virginia, 1880, p. 225.
[57] Transactions of the Medical Society of Virginia, 1881, p. 344. Strychnine and quinine were isolated in 1818 and 1819 respectively.
[58] Transactions of the Medical Society of Virginia, 1880, p. 178.

mand,[59] and the next year rather exultingly informed its readers that they no longer need depend upon imported antitoxin "now that such a firm as Park, Davis & Co., have a laboratory for its production."[60] Although he referred specifically to the use of antitoxin in diphtheria and was inclined to believe that "we are standing just now at the dawn of a new era of preventive as well as curative treatment of this as well as other kindred diseases," George W. Le Cato of Wachepreague, in a paper before the Medical Society of Virginia in 1894, still pinned his faith to a program of treatment initiated by his brother, Edwin W. Le Cato in 1863, consisting of a purgative followed by alternate doses of quinine sulphate and a syrup containing potassium chlorate and ferric chloride.[61] The extraordinary interest in diphtheria at this time is further reflected in a series of five articles appearing in the *Virginia Medical Semi-Monthly* early in 1896 on the diagnosis, pathology, and treatment of the disease.[62] In 1897 E. C. Levy appeared before the Medical Society of Virginia, reporting excellent results from the use of Loeffler's media in diagnosis and sounding the praises of antitoxin in treatment.[63] The next year diphtheria was the subject of the Society's discussion. James S. Irving of Danville presented all the known facts in regard to the organism, its cultural characteristics, and serum therapy. The discussion which followed was participated in by no less than eighteen fellows. Among them were only two skeptics. L. B. Anderson of Norfolk declared that he was "unwilling even yet to commit himself to the full acceptance of the doctrine that because the Klebs-Loeffler bacilli are often found in diphtheria, they are the cause," and R. C. Burks of Sherwood, holding to the value of turpentine both locally and internally, flatly refused to believe in "bugs" as the cause of the disease.[64]

The introduction of sera in the treatment of other diseases was to be expected. William L. Robinson of Danville published a paper in 1898 on anti-streptococcic serum in the treatment of puerperal septicemia, septic cellulitis, post-operative sepsis and erysipelas.[65] The Richmond Academy of Medicine and Surgery in 1898 received the report of a committee created to investigate the progress of serum therapy in Virginia. The committee had distributed questionnaires to a thousand physicians. Seventy-nine answered. Of these, thirty-five stated that they had never used serum of any sort in their practice. Of the

[59] Virginia Medical Monthly, 1894-'95, v. 21, p. 1251.
[60] Virginia Medical Monthly, 1895-'96, v. 22, p. 133.
[61] Transactions of the Medical Society of Virginia, 1894, p. 126.
[62] Virginia Medical Semi-Monthly, 1896, v. 1, pp. 79, 80, 83, 86.
[63] Transactions of the Medical Society of Virginia, 1897, p. 62.
[64] Transactions of the Medical Society of Virginia, 1898, pp. 50, 52.
[65] Virginia Medical Semi-Monthly, 1898-'99, v. 3, p. 687.

forty-four who had employed it, thirty-one had used it only in diphtheria, six in tuberculosis, four in diphtheria and tuberculosis, one in tetanus, one in diphtheria and tetanus, and one in diphtheria and puerperal sepsis. The total number of cases reported treated with serum was 151, of which 100 were of diphtheria, forty-eight of tuberculosis, two of tetanus, and one of puerperal sepsis.[66]

At the Tenth International Congress of Medicine at Berlin in 1890 Koch had announced the production of tuberculin and declared that he had discovered the cure of tuberculosis. This premature announcement, which subsequent events were to disprove, created the greatest enthusiasm all over the world, and Koch's lymph, as it was called, was widely employed and with high hopes. A leading article in the *Virginia Medical Monthly* in 1891 too hastily declared that it "has done and can do more than any other remedy except climatic treatment."[67] In 1891 S. K. Jackson of Norfolk published a paper entitled *Tuberculin, its value as a scientific discovery, apart from its therapeutic importance.*[68] The disastrous consequences of the general and uncontrolled use of tuberculin in the treatment of tuberculosis was quickly reflected in the Virginia medical press. In 1891 *Practice* told its readers that Koch's lymph consisted of a glycerine extract derived from the pure cultivation of tubercular bacilli, and in answer to the question, "Is there danger of tubercle dissemination by Koch's injections?" related many instances that seemed to give an affirmative answer.[69] All the while interest in tuberculosis increased. Anti-spitting laws were proposed by enthusiastic crusaders. The press ridiculed the proposal, and even the state medical journal opposed it as "inhuman nonsense." Declaring that consumptives could not help coughing, the editor was of the opinion that "the carrying out of such laws . . . . is impracticable, because they involve tax-payers in the necessity of providing hospitals and sanitoria for consumptives. To meet the needs of any community, they must be numerous or ample . . . . . But it is plain that the stinginess or poverty of the ordinary run of voter and tax-payer will not thus provide for a special class of invalids when even the poorhouse of his town-ship is oftentimes but a rude hut or barnhouse—scarcely worthy the name of a shelter from cold or

[66] Virginia Medical Semi-Monthly, 1897-'98, v. 2, p. 638.

[67] Virginia Medical Monthly, 1891, v. 18, p. 466. The investigation of serum therapy by the Richmond Academy of Medicine in 1898 revealed forty-eight cases of tuberculosis in which diphtheria antitoxin had been tried. In this dread disease the profession was apparently driven to any expedient.

[68] Journal of the American Medical Association, 1891, v. 16, p. 806.

[69] Practice, 1891, v. 5, pp. 36, 66.

storm."[70] In 1898 Chicago's J. B. Murphy reported the successful treatment of tuberculosis by artificial pneumothorax.[71]

Other subjects interested the profession. It was a decade of phenacetin,[72] of antifebrin, of antikamnia,[73] of the nitrites in a diversity of complaints,[74] of olive oil in the treatment of cholelithiasis, and of strong and militant faith in the uric acid diathesis.[75]

A discussion of typhoid fever or malaria could still attract an audience. John N. Upshur and John Eliot Woodbridge of Cleveland engaged in a heated debate over the treatment of typhoid fever, the vehemence of which shocked readers of the *Journal of the American Medical Association*.[76] Bedford Brown, a prolific writer on many medical subjects, enjoyed the distinction of appearing before the Pan-American Congress in Mexico City in 1896, presenting a paper on the autumnal fevers of the South Atlantic States. He assured his audience that a positive diagnosis could not be made without the microscope, reminding them that typhoid and malaria were distinct diseases.[77] Other worth-while discussions were concerned with Brand's treatment of typhoid,[78] with endocarditis, valvular disease of the heart, the indications for digitalis, Bright's Disease, and poliomyelitis. W. S. Cline of Woodstock in 1891 reported twenty-two cures of goitre. He had been in the habit of using tincture of iodine externally and the elixir of corydalis compound with five grains of potassium iodide internally three times a day.[79] This was the first mention of iodine treatment for goitre in the Virginia journals since Harris's report in 1854.

The most unique clinical report of the period was made by R. M. Slaughter of Alexandria, who in 1891 described two cases of *filaria sanguinis hominis*—the first instance of this disease to be noted in Virginia. Both patients had bloody chylous urine, and from each the embryo was recovered. This report received favorable comment in several American journals.[80]

[70] Virginia Medical Semi-Monthly, 1896-'97, v. 1, p. 615.
[71] Virginia Medical Semi-Monthly, 1898-'99, v. 3, p. 241. Some years before (1888) Dettweiler's advocacy of fresh air, alcohol, nourishing food, and compressed air in the treatment of tuberculosis attracted considerable attention in Virginia. Practice, 1888, v. 2, p. 196.
[72] Holladay, W. M., Virginia Medical Monthly, 1894-'95, v. 21, p. 602.
[73] Practice, 1891, v. 5, p. 137.
[74] Virginia Medical Monthly, 1890-'91, v. 17, p. 875; 1891-92, v. 18, p. 352.
[75] Pritchett, C. W., Virginia Medical Semi-Monthly, 1896, v. 1, p. 384.
[76] Journal of the American Medical Association, 1897, v. 29, pp. 20, 138, 293.
[77] Journal of the American Medical Association, 1896, v. 28, p. 1319.
[78] Practice, 1891, v. 5, p. 30.
[79] Virginia Medical Monthly, 1891-'92, v. 18, p. 991.
[80] Transactions of the Medical Society of Virginia, 1891, p. 239.

SURGERY

I

Surgery in Virginia was not completely weaned from general medicine before 1900. There was not a surgeon in the state who limited himself strictly to the use of the knife, refusing to compete with medical men in the diagnosis and treatment of the ordinary diseases of general practice. For this reason the advance in surgery in Virginia with few exceptions was slight until the latter years of the century.

Prior to 1830 the record of surgery in Virginia is meagre. Of eleven articles describing operations by Virginians in this period, four mark notable ventures into new fields. They were the articles on cleft-palate (1827) and ligation of the carotid (1829) by Mettauer; the *Case of Empyema successfully treated by Paracentesis Thoracis,* by Dr. Craven of Harrisonburg, 1824; and the *Case of successful Excision of the Cervix Uteri in a Scirrhous State,* by John B. Strachan, 1829. The other seven articles tell a story of wounds, fractures, burns, incised tumors, amputated arms, and strangulated hernias—a fairly good cross-section of the type of surgery of the period and not very different from that in which surgeons had been engaged for the previous one or two hundred years. Eight of the eleven articles were given a place in the list of special papers by American surgeons, compiled by H. H. Smith for his *System of Operative Surgery,* published in 1855. They included the four cited above, and four others. These were: *A Case of Hernia, in which the Stricture remained at the Mouth of the Sac, after the Intestine was returned by Taxis,* by N. Snead (1829); *On the Best Method of Removing Contractions in Limbs From Burns,* by William G. Nice of Manchester (1820); *A Case of Injured Ulna, successfully amputated,* by Robert B. Butt of Portsmouth (1825); and *The Pathology of Bones, with Case of successful Removal of Carious Ribs,* by H. McDowall of Fincastle (1828). Surgery was still without anæsthesia or antisepsis, and few men in their right minds dared invade either the abdomen or the chest.[81]

After 1830 surgery was put upon quite a different plane in Virginia by John Peter Mettauer of Prince Edward and his rival lithotomist, Pitman Clemens Spencer of Petersburg. The spectacular operations of Augustus L. Warner were attracting attention in Richmond in 1845, and from this time until the Civil War Charles Bell Gibson held the stage, introducing anæsthesia into the state and being generally recognized as its leading surgeon. After the war

[81] Yet it was in this very period (1809) that Ephraim McDowell, a native of Virginia, successfully performed the earliest ovariotomies.

surgical advance was chiefly due to Hunter McGuire, James L. Cabell, John Syng Dorsey Cullen, Francis Deane Cunningham, and George Ben Johnston, a group of unusual and brilliant men whose influence still lingers in the position that surgery attained through them in the state.

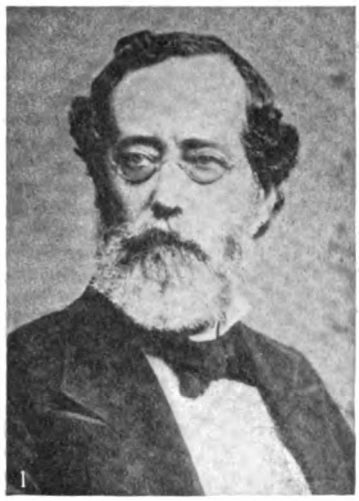
II

The anæsthetic agents were among the great discoveries of the Nineteenth Century. To American enterprise and invention is largely due their application to surgery. Crawford W. Long of Georgia operated under ether in 1842, and W. T. G. Morton administered it for John C. Warren at the Massachusetts General Hospital on a memorable day in October 1846. Horace Wells of Connecticut introduced nitrous oxide in 1844. Chloroform in obstetrics was first employed by Sir James Simpson of Edinburgh in 1847, and cocaine was used as a local anæsthetic by Carl Kollar of Vienna in 1884. Halstead began popularizing cocaine in this country in 1885. Before the introduction of ether and chloroform surgical patients had been narcotized by soporific draughts and sponges, alcohol, and opium—even hypnotism and suggestion had been employed.

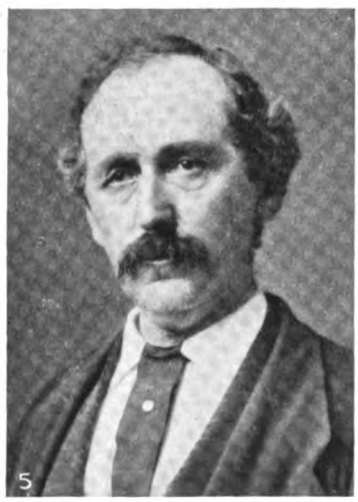
The question of anæsthetic agents came before the first meeting of the American Medical Association in 1848. There was considerable difference of opinion. Could anæsthetic agents annul pain without risk to life? "Is the hazard so inconsiderable as to justify their employment in all cases where it is desirable to prevent the pain of surgical operations?"[82] These and other questions were referred for study to a committe on which Charles Bell Gibson served. In the course of the meeting Gibson took occasion to report five cases of his own. He had employed ether in the amputation of a thigh with excellent results. In the removal of a large malignant tumor from the neck the effects had not been so pleasing. His experience with chloroform, evidently timidly used, was less satisfactory. Full anæsthesia had not been induced in any of the cases. In one instance excitement amounting to frenzy greatly delayed and upset the operator.

From this time on both ether and chloroform were gradually introduced into Virginia. James Bolton of Richmond reported his experience with ether in operations on hemorrhoids in 1851, and with chloroform in *A Test For the Safety Point in Anæsthesia* in 1852.[83] Articles on chloroform were contributed

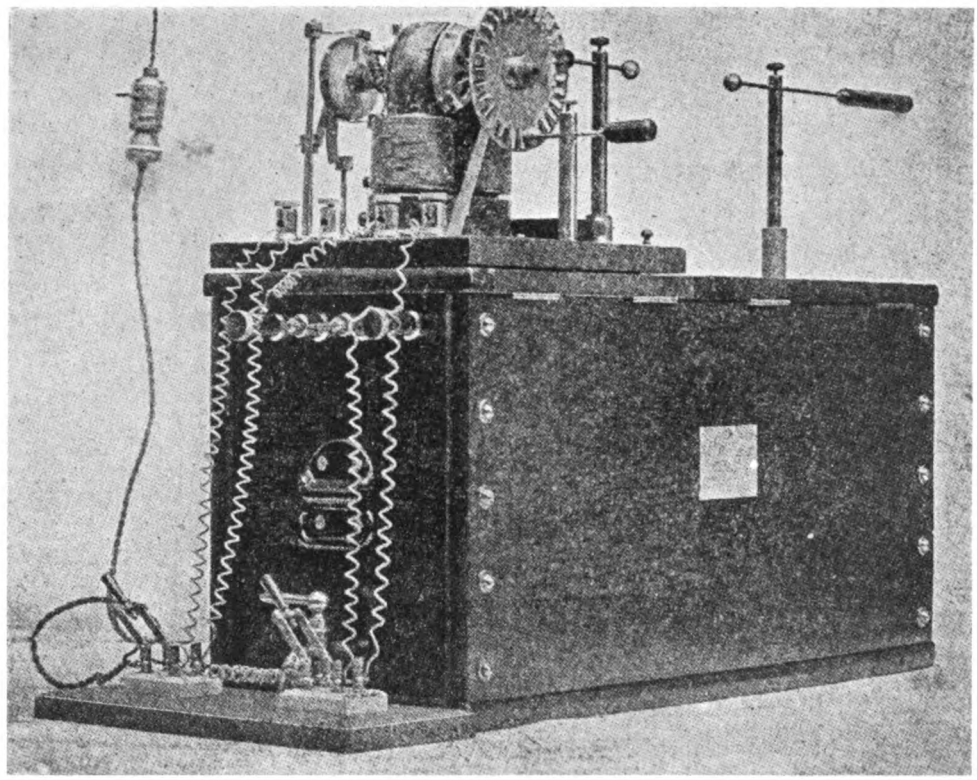
[82] Transactions of the American Medical Association, 1848, v. 1, p. 176.
[83] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 662; 1852, v. 2, p. 681.







1. JOHN G. SKELTON, of Richmond and Powhatan. 2. GEORGE BEN JOHNSTON, of Richmond. 3. JOHN CYRUS MERCER, of Fredericksburg, grandson of Hugh Mercer. 4. ROBERT HENRY CABELL, of Richmond. 5. W. R. WEISIGER, of Manchester.



ONE OF THE FIRST X-RAY MACHINES OPERATED IN VIRGINIA

by J. Wistar Walke of Chesterfield in 1852,[84] by R. L. Madison in 1853,[85] and by Charles McCormick of Winchester in 1858.[86] In these early years the utility and safety of the new anæsthetic agents were foremost in the minds of physicians. A report on these points was made to the Medical Society of Virginia in April 1851, by Drs. James Bolton, Charles Bell Gibson, John A. Cunningham, and William W. Parker. Its summary stated:

"1st. Of nearly fourteen hundred instances reported, in which anæsthesia has been produced, not one has occurred in which either a fatal or permanently injurious consequence has been proved to have resulted.

"2d. That on every occasion on which it is desirable to use anæsthetic agents, we may do so with confidence, observing proper precautions.

"3rd. That chloroform is preferable to ether, and is equally safe. We would compare its advantages to those of the alkaloids, quinine, morphine, &c., over the bulky and often nauseous substances from which they are derived.

"4th. That in surgical operations the patient is not only saved the cruel agony which has hitherto been inseparable from many of them, but is in a more favorable condition for their successful performance.

"5th. That the process of natural labor is facilitated by anæsthesia."[87]

During the Civil War chloroform was the favorite anæsthetic in the Confederate medical service and after the war down to very recent times it continued to enjoy in Virginia an unmerited popularity. In 1887 Hunter McGuire said he preferred ether "in feeble, very anæmic people, or those suffering from the prostration of shock, or loss of blood," but that "in either the young or the old, or in cases when cardiac, renal or pulmonary trouble is suspected, as a rule, I think chloroform is safer."[88] Chloroform was quickly applied to obstetrics. W. H. Bramlett gave his experience with it in midwifery in 1875,[89] John Herbert Claiborne, H. M. Clarkson, and C. T. Vaughan wrote on the use of chloroform in labor during the eighties,[90] and Bedford Brown in 1895 reported its use in 1,500 obstetrical cases without serious results.[91] Rectal etherization was employed by William H. Coggeshall before 1884.[92]

[84] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 59.
[85] Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 632.
[86] Virginia Medical Journal, 1858, v. 10, p. 455.
[87] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 197.
[88] Virginia Medical Monthly, 1887, v. 14, p. 587.
[89] Virginia Medical Monthly, 1875-'76, v. 2, p. 861.
[90] Journal of the American Medical Association, 1884, v. 3, p. 401; Virginia Medical Monthly, 1886-'87, v. 13, pp. 680, 690.
[91] Journal of the American Medical Association, 1895, v. 25, p. 354.
[92] Virginia Medical Monthly, 1884-'85, v. 11, p. 361.

In 1884 the *Virginia Medical Monthly* referred editorially to the promising advantages of cocaine in surgery of the eye but considered the price of $4.20 an ounce, or $67.20 a pound, rather high.[93] It was later discovered the drug was thirty times as expensive as originally stated. The same year Alfred C. Palmer, Charles M. Shields, and Joseph A. White reported success in the local use of cocaine.[94]

Modern surgery was born with the introduction of anæsthesia. It did not reach the full bloom of maturity until it had grasped and appropriated the revolutionary principles of Listerian antisepsis. This important innovation came into vogue slowly in Virginia. Prejudice and professional inertia could be overcome only by degrees. Astonishing as it may seem, in the perfect avalanche of medical articles that descended upon the Virginia journals of this period, less than half a dozen gave any consideration to Lister's innovation.[95]

A medical student in 1879 recalls one of George Ben Johnston's first operations. Francis Deane Cunningham, a man of established reputation, lent his presence to the occasion and generously assisted in the "elaborate" preparations necessary to insure removal of the deadly germs, which were thought to inhabit the air and from this situation to invade the open wound of the patient. Armed with an atomizer containing a solution of carbolic acid, Dr. Cunningham carefully covered the whole operating room, spraying the germ-killing solution into the air. All through the operation he continued this important feature of Listerism. Instruments were not boiled, and though the operator's hands were washed the use of antiseptics on his hands and on the skin of the patient was not thought of. Faith in the carbolic spray was supreme.[96]

As great a surgeon as Hunter McGuire was slow in endorsing efforts at antisepsis, in 1884 declaring, "To the country doctor, ... it is often impossible to carry out listerism with all its tedious minuteness. Moreover it is often unnecessary, the pure country air of Virginia being in itself aseptic."[97] Mosetig substituted iodoform for the classic Listerian dressing, and after its introduction into Billroth's Clinic it "made its way triumphantly over the greatest part of the European Continent. Under its influence no case of pyemia has occurred."[98] M. A. Rust of Richmond, writing in 1884 on the *Evolution of Antisepticism*—

[93] Virginia Medical Monthly, 1884-'85, v. 11, p. 420.
[94] Atlantic Journal of Medicine, 1884, v. 2, pp. 193, 196; Virginia Medical Monthly, 1884-'85, v. 11, p. 432.
[95] Stuart McGuire wrote an article on the aseptic operation in 1893. Virginia Medical Monthly, 1893, v. 20, p. 887.
[96] Besides his spray, Lister's antiseptic principle included a variety of dressings impregnated with strong antiseptics. The earliest was a putty-like substance impregnated with carbolic acid.
[97] Virginia Medical Monthly, 1884-'85, v. 11, p. 502.
[98] Virginia Medical Monthly, 1884-'85, v. 11, p. 515.

unconscious asepticism, Listerism, iodoformisation—sang the praises of iodoform, which "rose on the antiseptic sky and shone as a dazzling star from 1880 to 1882."[99] In 1885 J. W. Bryant of Petersburg wrote of iodoform surgical dressings.[100] An editorial in the *Atlantic Journal of Medicine* in 1883 discussed "the mercuric bi-chloride of the new nomenclature, which bids fair to supplant the carbolic acid in surgical practice."[101] At the same time it reported other recently discovered remedies: mercury for syphilis, cod liver oil for consumption, belladonna for whooping cough, salicylic acid for rheumatism, condurango for cancer, cold water for fevers.

As a result of the successful employment of anæsthesia and Listerian antisepsis the later decades of the Nineteenth Century in Virginia as elsewhere were characterized by increasing surgical activity, the introduction of many new procedures, and the attainment of results little dreamed of a few decades before. Hunter McGuire, living in the midst of this development, declared that the century "gave us the amputations at the hip and shoulder joints, the resection and removal of portions of the upper and lower jaws, as well as the entire removal of each; the resection of bones at the joints with the preservation of the periosteum . . . the ligature of the arteries within the trunk . . . . the various operations for cleft and deficient palate, partial amputations of the foot after the manner of Pirigoff, Malgaigne, Syme, Chopart and Lisfranc; the operations for opening the upper air passages in cases of asphyxia . . . . . the successful treatment of calculus by lithotrity, the treatment of hairlip and club-foot. It improved the methods of remodeling the nose, lip, and other facial deformities by transplantation of tissue; . . . . it extended our knowledge of tumors, . . . The manner of treating internal aneurisms by ligature and by electricity; treatment, by improved methods, of varicose veins, the extirpation and intubation of the larynx, the removal of the thyroid gland, treatment of gun-shot and penetrating wounds of the chest and abdomen; removal of fluids from cavities and abscess by means of the aspirator; removal of the kidney, spleen, the uterus, and the various tumors found in the abdominal cavities. It taught us how to remove the pus collected in abscess of the liver, how to relieve the gall bladder of foreign contents, how to resect portions of the stomach and the bowel, how to extirpate the inferior portion of the rectum." After referring to Sims' invention of the speculum and his metallic suture, to the ophthalmoscope and the laryngoscope, to anæsthesia and the lessons learned in cleanliness and antisepsis he concluded by saying that "The predominating idea is no longer how we can get rid of an

[99] Virginia Medical Monthly, 1884-'85, v. 11, p. 502; 1885, v. 12, p. 129.
[100] Virginia Medical Monthly, 1885-'86, v. 12, p. 22.
[101] Atlantic Journal of Medicine, 1883, v. 1, p. 290.

offending member; it is rather what can be done to preserve and render it useful to its possessor."[102]

III

It could almost be said that general surgery invaded the abdomen by the genito-urinary route. In Virginia, long before there was any attempt at differentiating surgery from medicine, genito-urinary surgery constituted a large part of surgical procedure. Before 1860 lithotomy and operations for stricture were the main business of the surgeon. Two men in Virginia stood out prominently in this field. John Peter Mettauer, summing up his cases in 1853, reported that he had operated for stone in the bladder seventy-nine times, performed abdominal paracentesis fifty-eight times, successfully repaired vesico-vaginal fistula four times and operated upon and cured more than 200 cases of stricture.[103] He performed a prodigious number of lithotomies. His "excellent description" of hypospadias, for which he operated successfully before 1842, was commented upon and praised by H. H. Smith.[104]

Pitman Clemens Spencer's[105] reputation as a lithotomist is said to have been nation-wide also, and his name was a household word in Virginia and North Carolina. He became an advocate of lateral lithotomy, using Dupuytren's double concealed lithotome, after having at first practised lithotrity. The technique of the latter he had perfected in Paris, devoting "two or three hours every day to breaking the stone and applying the instruments upon the dead body."[106] He reported in 1858 twenty-eight operations for lithotomy with a loss of only his first two patients.[107] In the preparation of his patients he employed creosote in alcohol as an antiseptic and, tying the legs of the patient together until voiding was natural, forbade the post-operative use of the catheter.

After 1870 Hunter McGuire based no little of his reputation upon his genito-urinary surgery. It was due chiefly to his activities that interest centered in the bladder, in the prostate, and in the suprapubic cystotomy. His contribution to the surgery of the prostate gland deserves more than passing notice. In 1888 he published an article on *Operative Treatment in Cases of Enlarged Pros-*

[102] Address before the Alumni of Jefferson Medical College, April 4, 1887, Virginia Medical Monthly, 1887-'88, v. 14, p. 81.

[103] Virginia Medical and Surgical Journal, 1853, v. 1, p. 1.

[104] Smith: System of Operative Surgery, v. 2, p. 228.

[105] Born in Charlotte County in 1793, the son of Gideon and Catherine Spencer, and brother of Dr. Mace C. Spencer under whom he first studied medicine. He acted as volunteer surgeon's mate in the War of 1812. In 1818 he graduated from the University of Pennsylvania. After practising for nearly ten years at Nottoway Court House he went abroad in 1827 for study, working under Civiale, Heurteloup, and Dupuytren. Returning from Europe he settled in Petersburg, where he died, unmarried, in 1860. Maryland and Virginia Medical Journal, 1860, v. 14, p. 250.

[106] Maryland and Virginia Medical Journal, 1860, v. 14, p. 250.

[107] Virginia Medical Journal, 1858, v. 11, p. 1.

tate.[108] His operation consisted of a simple suprapubic cystotomy designed to establish a permanent sinus. Nothing was done to the prostate. "It was hoped that absolute rest of the prostate and parts about the neck of the bladder by an artificial urethra above the pubis would result in a reduction of the hypertrophy and restoration of the parts to their normal condition."[109] Obstructed cases showed immediate improvement, although many of them doubtless succumbed later to ascending urinary infection. McGuire's procedure was widely discussed and adopted. An account of his first two cases was read before the meeting of the American Surgical Association in 1888 and published in volume six of its *Transactions* as well as in the *Journal of the American Medical Association.* The discussion which followed centered for the most part around the danger of the procedure in inexperienced hands, and most of the surgeons present seemed to prefer the old methods. Two years later McGuire reported twenty-one cases.

An editorial in the *Journal of the American Medical Association* in 1892[110] gave McGuire priority in this operation over several French surgeons,[111] Dr. Verchere being credited with having performed the first suprapubic operation in France in 1889. In 1893 the *Journal* declared Reginald Harrison and Mr. McGill responsible for "the principal advances in the surgery of the prostate . . . . Scarcely less important, however, has been the popularization of suprapubic cystotomy by our distinguished countryman, Hunter McGuire."[112] In 1895 McGuire was engaged in experimenting with the prostate gland of the sheep. It was hoped that the administration of the extract of the gland would reduce prostatic hypertrophy. Fairchild Brothers and Foster manufactured the preparation, and the *Virginia Medical Monthly* advised friends of Dr. McGuire that they might have free samples for experimentation upon themselves.[113]

The first two nephrectomies reported in Virginia were performed by George Ben Johnston in 1899.[114] Besides Mettauer, Johnston, Spencer, and McGuire no less than thirty men in Virginia published articles on genito-urinary surgery. Among these were Alexander Somervail (1834), Carter P. Johnson (1851), J. Alexander Waddell (1854), F. W. Roddey (1855), George C. Starke (1855), George B. Hunter (1853), Joseph W. Smith (1854), Robert Harrison

[108] Virginia Medical Monthly, 1888-'89, v. 15, p. 445.
[109] Virginia Medical Monthly, 1889-'90, v. 16, p. 166.
[110] Journal of the American Medical Association, 1892, v. 19, p. 23.
[111] Pierre Franco performed the first suprapubic operation in France, in 1556. Garrison: History of Medicine, p. 221.
[112] Journal of the American Medical Association, 1893, v. 21, p. 133.
[113] Virginia Medical Monthly, 1895-'96, v. 22, p. 1286.
[114] Medical Register, 1898-'99, v. 2, p. 329. William C. Dabney, in a theoretical discussion of nephrectomy, stated in 1873 that the operation had been done only eight times. Virginia Clinical Record, 1873, v. 3, p. 561.

(1855), Charles Bell Gibson (1851, 1857, 1858), W. H. B. Goodwin (1857), George E. Wiley (1879), William J. Crittenden (1887), R. M. Slaughter (1890), Hugh T. Nelson (1890), George Corrie (1892), Hugh M. Taylor (1894), Zeb Vance Sherrill (1895), Charles W. Pritchett (1896), J. W. Long (1896), M. W. O'Brien (1896), M. D. Hoge, Jr. (1897), Jacob Michaux (1897), Virginius W. Harrison (1897), John Upshur (1898), Junius F. Lynch (1899), I. S. Stone (1889), Charles R. Robins (1897), and Stuart McGuire (1892, 1895, 1896).

Herniotomy, one of the oldest surgical procedures, was from the time of Paul of Aegina to the Sixteenth Century in the hands of roaming mountebanks, who performed mutilating operations which often included the sacrifice of the testicles. Respectable surgeons put the operation upon a dignified basis, and each succeeding century witnessed improvement in technique and results. For some unknown reason Virginia surgical literature of the Nineteenth Century has relatively little to say about hernia. Most of the references are to strangulated hernia and appear for the most part before 1870. N. Snead described a case in 1829, Charles W. Chancellor in 1855, Charles Bell Gibson in 1852, J. A. Hunter in 1855, and Francis H. Deane in 1853.

In view of the sure footing upon which appendectomy now stands it is difficult to believe that it was the last decade of the Nineteenth Century before this surgical condition was fully appreciated in Virginia.[115] John F. Peebles in 1843 made a significant report of "a death from extensive intestinal and peritoneal inflammation, resulting from a perforation of the intestinal coats, occasioned by a calculus lodged in the appendix vermiformis."[116] The case was evidently one of a ruptured appendix. In 1851 J. N. Broocks of Richmond wrote on acute peritonitis,[117] and in 1869 W. A. Gillespie reported *Three Cases of Inflammation of the Cæcum.*[118] These were probably all early descriptions of the same surgical disease. In 1881 Robert J. Preston of Abingdon read a paper before the Southwest Virginia Medical Society on *Typhlitis.*[119] Believing his patient to be suffering from "an inflammation of the cœcum, from impacted fæces, a cholagogue cathartic was, at once, administered, together with a mild opiate to quiet pain, and counter-irritants were applied to the part. I directed a

[115] The first description of appendicitis in English was given by Sir James Parkinson in 1812.
[116] American Journal of the Medical Sciences, 1843, v. 5, p. 122.
[117] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 539.
[118] Boston Medical and Surgical Journal, 1869, v. 4, p. 217.
[119] The term "appendicitis" does not occur in either the 1846 or the 1847 editions of Dunglison's Medical Dictionary. In both editions "typhlitis" is defined as an inflammation of the cæcum "occasionally leading to perforative ulceration."

copious enema of oil and warm soap-water to be given in a few hours, and opiates and counter-irritants to be kept up as needed."

He continued: "From the anatomical structure of the cœcum and vermiform appendix, should we not expect to find impacted, hardened fæces, at this point, very difficult of removal, and taking into account even the resistance of gravitation to be overcome? The history of the above case reported, and the effect of cathartics and copius enemata, proved pretty clearly to my mind that impaction of the cœcum was the prime cause of most, if not all, the cases. . . ."[120]

In 1883 R. B. Stover of Richmond, writing upon *Typhlitis and Perityphlitis,* advocated potassium sulphide or Culx's sulphurata in treatment. Operation was reserved for cases complicated by gangrene.[121] In 1887 Hunter McGuire delivered an address before the alumni of Jefferson Medical College on the *Development of Medical Science,* but although he mentions many recent innovations in surgery there is no reference to appendicitis. The journal, *Practice,* describing surgical progress in 1889, stated that "the opinion is gaining ground that perityphlitis, or, as it is now termed, appendicitis, is a condition requiring surgical measures in a large number of instances,"[122] and in 1893 the same journal expressed the opinion that the appendix vermiformis should be removed as soon as a diagnosis is made.[123]

After 1890 Virginia medical literature was showered with articles dealing with appendicitis. At first no unanimity of opinion existed. There were those who believed that cathartics should be administered early in an attack. Others thought that opium should be given to quiet peristalsis. In this connection it is to be recalled that John B. Deaver of Philadelphia as late as 1896 advocated castor oil as soon as the diagnosis was established. He soon changed his opinion, and along with Ochsner and others belonged to the school which advocated early surgical removal.[124]

In 1893 John W. Dillard of Lynchburg declared that the treatment of appendicitis was yet a matter of controversy, but advised that, "During the incipient stage saline cathartics . . . should be freely given. . . . An operation ought not to be thought of during the first few days; but as soon as there is *certainty* of the *existence* of an *abscess,*" operation should not be delayed.[125] The next year Edward E. Feild of Norfolk, summarizing current opinion, advocated the ice bag, high enemata, and small doses of saline. Operation was to

[120] Virginia Medical Monthly, 1880-'81, v. 7, pp. 838, 841.
[121] Atlantic Journal of Medicine, 1883, v. 1, p. 42.
[122] Practice, 1890, v. 4, p. 51. Edited by Dr. Winn, of Richmond.
[123] Practice, 1893, v. 7, p. 95.
[124] Hunter McGuire advised: "In appendicitis attempt to purge. If there is not immediate improvement, operate." Bi-Monthly Bulletin, University College of Medicine, 1897, v. 2.
[125] Virginia Medical Monthly, 1893-'94, v. 20, p. 513.

be considered only in cases of perforation.[126] In 1896 Hunter McGuire reported seventeen cases of chronic appendicitis treated by operation.[127] J. Meade Callender of Petersburg, William L. Robinson of Danville, Hugh M. Taylor, W. T. Oppenhimer, and Virginius Harrison of Richmond, and Charles G. Cannaday of Roanoke soon joined the list of contributors to the subject. Hunter McGuire as late as 1897 wrote: "I attribute my success largely to the fact that, if possible, I operate during the quiescent stage....when danger of sepsis is passed and inflammatory symptoms have disappeared. The danger is practically nothing if the surgery is clean....I sometimes wait, and possibly, in a few instances, with some risk to the patient, until the acute symptoms pass off, and sufficient time has elapsed for all inflammation to disappear....[which] requires generally two or three weeks. . . ." He had only one death in fifty-two cases. "I confess I am not in favor of an operation in all cases as soon as a positive diagnosis is made," he wrote. "Too many of them get well and stay well, to warrant it, and others can be made to wait, and have the operation during an interval."[128] In 1899 Virginius Harrison advised operating just as soon as the diagnosis was complete, but even at this late date Landon Edwards "wished to go on record against this indiscriminate and wholesale operating."[129]

The surgery of the liver and gall bladder was timidly undertaken by Virginia surgeons before 1900. Jacob Michaux wrote on *Biliary Concretions and Gallstones,* but did not suggest surgical treatment; and B. M. Atkinson of Staunton recommended olive oil for cholelithiasis in 1894. It was not until 1895 that Hugh M. Taylor and George Ben Johnston separately reported the surgical treatment of cholelithiasis.[130] Taylor stated that "the surgery of the gall tract is perhaps claiming a professional interest in extent second only to that accorded appendicitis." In this field of rapid evolution the operations popular at the time were cholecystenterostomy and choledochotomy. As late as 1899 Hunter McGuire wrote under the significant title *Four Recent Cases of Gall Stones.*[131] Two years before, George Ben Johnston reported his experience in the treatment of hepatic abscess.[132]

Surgery of the stomach and intestines in the modern sense was practically unheard of in Virginia during this period. In 1897 Charles G. Cannaday per-

[126] Virginia Medical Monthly, 1894-'95, v. 21, p. 727.
[127] Virginia Medical Monthly, 1895-'96, v. 22, p. 885.
[128] Virginia Medical Semi-Monthly, 1897-'98, v. 2, p. 33.
[129] Virginia Medical Semi-Monthly, 1899-1900, v. 4, p. 362.
[130] Virginia Medical Semi-Monthly, 1895-'96, v. 22, pp. 665, 785.
[131] Virginia Medical Semi-Monthly, 1899-1900, v. 4, p. 485.
[132] Medical Register, 1897, v. 1, p. 45.

formed a lateral anastomosis of the ileum and colon on account of obstruction of the cæcum.[133] In 1899 George Ben Johnston performed a gastrostomy[134] for stricture of the œsophagus.[135] But for the most part surgical procedures directed at the intestinal tract consisted in the repair of abdominal wounds, typhoid perforations, and those complicating accidents of duodenal ulcer.

The record of rectal surgery in Virginia before 1890 is confined to one or two isolated reports of the treatment of hemorrhoids. As early as 1846 Henry Selden of Norfolk translated Ammussat's *New Operation For Hemorrhoids* for the *American Journal of the Medical Sciences.* In 1851 James Bolton doubly ligated the vessels under ether.[136] After 1890 ulcers, fissures, and the ligation of hemorrhoids received considerable emphasis.

The earliest record of the surgical treatment of the thyroid in Virginia is the *Report of a Case in which an Enlargement of the Isthmus of the Thyroid Body Was Successfully Extirpated,* by George A. Otis of Richmond in 1853.[137] In 1870 W. H. Triplett reported *A Case of Extreme Exophthalmos* that successfully underwent operation at his hands.[138] Thyroid surgery in Virginia after this must have fallen on evil days, for there were no more reports before 1900.

Until recent years head surgery was almost exclusively limited to fractures of the skull. Trephining was the accepted procedure. James Bolton operated unsuccessfully in 1852. John W. H. Trugien of Portsmouth reported a successful case in 1851[139] and Carter P. Johnson of Richmond cured a case of epilepsy by trephining in 1853.[140] W. J. Knight of Newport News reported a case in 1897,[141] John Walker of Lynchburg in 1896, and W. H. Triplett in 1873.[142] In each case decompression was the procedure. In 1858 Charles Bell Gibson used the trephine and Hays' saw to remove a bony tumor from the os frontale, thus relieving impaired vision, deafness, and paralysis of the muscles of the left side of the face.[143] In 1895 J. Allison Hodges of Richmond wrote on *Traumatic Epilepsy illustrated by two operative cases,* and a year later he described the medical and surgical treatment of epilepsy.[144]

[133] Virginia Medical Semi-Monthly, 1897-'98, v. 2, p. 143.
[134] The first English cases of gastrostomy were performed in 1858-'59 by J. C. Forrester. Garrison: History of Medicine, p. 519.
[135] Virginia Medical Semi-Monthly, 1899-1900, v. 4, p. 585.
[136] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 662.
[137] Virginia Medical and Surgical Journal, 1853-'54, v. 2, p. 115.
[138] Boston Medical and Surgical Journal, 1870, v. 5, p. 98.
[139] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 647.
[140] Virginia Medical Journal, 1857, v. 9, p. 307.
[141] Medical Register, 1897, v. 1, p. 143.
[142] Boston Medical and Surgical Journal, 1873, v. 88, p. 385.
[143] Virginia Medical Journal, 1860, v. 12, p. 112.
[144] Virginia Medical Monthly, 1894-'95, v. 21, p. 942; Virginia Medical Semi-Monthly, 1896-'97, v. 1, p. 422.

CHAPTER VIII

SPECIALISM

SPECIALIZATION began to be popular in America about 1870, thriving chiefly in the larger cities. It was apparent to John S. Apperson, writing in 1886 on advances in the practice of medicine, that specialism on a higher scale was inevitable: "Medicine, as a distinct department of the curative art, with its venerable principles and glorious prestige, is made to yield commonage to the activity and push of specialism." He quoted Austin Flint's remark that "specialism conduces to the advancement of knowledge. It behooves us, however, to consider, were the practice of medicine given over to specialists, what would become of the medical profession?" And William Brodie, president of the American Medical Association, declared in 1886 that members of the profession had begun to realize "that by devoting themselves to one branch instead of working up a general practice, they could often do more good, earn more money, and have less arduous work to perform."[1]

The great body of the profession was suspicious of the new tendency. For a long time the country had been overrun with quacks, claiming special powers over disease and advertising widely in the papers. Quite naturally, therefore, when certain men within the medical profession itself began to make claims of skill beyond the reach of the average practitioner, suspicion and antagonism were engendered. The American Medical Association resolved: "That it shall not be proper for specialists publicly to advertise themselves as such, or to assume any title not specially granted by a regularly chartered College,"[2] and the Medical Society of Virginia went on record, October 1871, declaring "That we deprecate all circular and other advertisements of specialties, as contrary to the letter and spirit of our system of Ethics, and should be discountenanced by all good men."[3]

In spite of these warnings many Virginia physicians were to be found advertising in 1871. Their claims ran: "Specialty-Surgery," "Diseases of Women and Children," "Diseases of Females," "Diseases of the Urinary Organs," "Diseases of the Ear and Eye," or of the throat or the nervous system—flagrant and willful violations of the Code of Ethics! An editorial writer remonstrated: "When one calls himself a specialist in Surgery, in Diseases of Women, Dis-

[1] Transactions of the Medical Society of Virginia, 1886, pp. 89-91.
[2] Virginia Clinical Record, 1873, v. 3, p. 140.
[3] Virginia Clinical Record, 1873, v. 3, p. 140.

eases of the Eye and Ear, &c., &c., he should refuse all other cases of disease except those embraced within his specified or special branch.....There are very few 'specialists,' simon-pure, this side of New York—perhaps Baltimore may have one—all of the others, so-called, are willing and glad to treat any case from worms up to ovariotomy."[4] All such opposition was swept aside in the steady march of progress. Specialization was profitable, the public liked it, and the general practitioner in time began to take off his hat to those brother physicians whom fortune seemed determined to smile on.

OBSTETRICS

One of the earliest subdivisions of medicine to be recognized as a specialty was obstetrics. In America, throughout the Colonial period and well into the Nineteenth Century, most of the deliveries of pregnant women were in the hands of midwives. But from the time of William Shippen, who in 1765 conducted a private school of midwifery, an increasing number of men with a reputation in the art of the accoucheur flourished in this country. The first American professorship of midwifery was created at King's College, New York, in 1767 with John Tennent as the first incumbent. In 1791 midwifery was taught as a part of the chair of anatomy and surgery in the University of Pennsylvania, and by 1810 a separate chair of midwifery was created. In other American medical schools there was first this association of midwifery with some other department, then the gradual recognition of the fact that the chair was important enough to be taught by itself. Samuel Bard of New York wrote the first American textbook of midwifery in 1807, and William P. Dewees published his system of midwifery in 1824.

The practice of obstetrics in Virginia before 1900 was not a specialty in the modern sense. There were, however, a number of men trained and skilled in the management of pregnancy, who enjoyed considerable reputation as obstetricians. Associated with the Medical College of Virginia as successive professors of obstetrics from 1838 to the end of the century were Richard L. Bohannan, James H. Conway, Robert T. Coleman, Christopher Tompkins, and J. Page Massie. In the University College of Medicine, George Ross, Jacob Michaux, and John F. Winn each held the chair of obstetrics. Though all were much sought after as obstetricians, they by no means limited themselves to the specialty.

[4]Virginia Clinical Record, 1873, v. 3, p. 189.

Early Virginia writers on obstetrical subjects were John Spence of Dumfries, John Peter Mettauer of Prince Edward, S. H. Harris of Clarksville, P. W. Harper of Dinwiddie, Henry Lee Heiskell of Winchester, Bedford Brown of Alexandria, and George Cabell of Richmond. In the principal medical journals of this century there were more than 120 obstetrical articles contributed by Virginians, most of them dealing with extra-uterine pregnancy, eclampsia, puerperal sepsis, placenta prævia, and the use of auscultation, of the forceps, and of chloroform as an anæsthetic. Before 1856 there were reports of five Cæsarean operations performed in the state.[5]

In spite of the great interest taken by the medical profession in obstetrics at this time, midwives still presided at the great majority of deliveries, and there is no evidence to show that their work was any better than it had been in the preceding century.

GYNECOLOGY

Gynecology was the creation of Southern surgeons. Ephraim McDowell, native of Virginia, was the first ovariotomist. William Baynham of Virginia was among the earliest to operate for extra-uterine pregnancy, and John Peter Mettauer's successful operations for vesicovaginal fistula were proclaimed far and wide. J. Marion Sims of South Carolina, renowned for his work on vesicovaginal fistula, was the originator of the vaginal speculum. Thomas A. Emmet, native of Virginia, Sims's successor at the Woman's Hospital in New York, was called the only exclusive specialist in this country. He was a man of marvelous mechanical ingenuity and operative skill, with an international reputation. The progress of gynecology as a specialty in this country may be gauged by the fact that it was 1876 before the American Gynecological Society was founded.

Diseases of women and children were taught as a part of the chair of obstetrics in the Medical College of Virginia from its founding until 1868. From that time until 1893 the subject constituted a chair by itself, held successively by J. S. D. Cullen, J. S. Wellford and J. W. Long. Operative gynecology began in the college with the advent of Dr. Long in 1893. Up to this time the treatment of the diseases of women had been limited almost entirely to the administration of the so-called specific drugs, the use of douches, the applica-

[5] Virginia Medical Journal, 1856, v. 7, p. 169. Four of the operations were performed by: Brodie S. Herndon, of Fredericksburg, 1846; William G. Smith, of Northampton, 1853; Charles S. Mills, of Richmond, 1856; Edward Drew, of Richmond, 1856. The fifth was reported by M. L. Weems, in 1836. It was performed in 1828 at Occoquan, Virginia, and was witnessed by him, but the operator was "an empiric who enjoyed an extensive practice" in Fairfax County. It was unsuccessful.

tion of tampons, and the insertion of pessaries. Dr. Long severed his connection with the College in 1897 following a misunderstanding with the professor of surgery, George Ben Johnston. The dispute, which arose over the right of the general surgeon to trespass upon the province of the gynecological surgeon, is one which even modern surgery has not been altogether able to settle. After 1897 Dr. Johnston became professor of gynecology and abdominal surgery. At the time of the organization of the University College of Medicine (1893) Isaiah H. White became professor of diseases of women in that institution. He was succeeded the next year by Edward McGuire, who in turn was succeeded by Jacob Michaux. At the University of Virginia both obstetrics and gynecology were attached to the department of medicine until the end of the century.

DISEASES OF THE EYE, EAR, NOSE, AND THROAT

Diseases of the eye, ear, nose, and throat as specialties began to assume importance in this country early in the Nineteenth Century. The oldest was ophthalmology. Otology was shortly associated with it. It was not until the middle of the century that laryngology became a specialty. Elisha North established an eye infirmary in New London, Connecticut, in 1817. The Pennsylvania Infirmary of the Diseases of the Eye and Ear was founded in 1822. It was 1866 before these specialties began to be taught in the medical schools. The first American ophthalmologist was George Frick of Baltimore, who in 1823 began teaching and writing upon the subject. As early as 1838 Fanny Kemble described the removal of tonsils in Philadelphia by passing a wire around the tonsil and tightening it "so as to destroy its vitality in the course of twenty-four hours." She asserted that "the mode usually resorted to with adults (for this it seems is a frequent operation here) is cutting the tonsil off at once."[6] The ophthalmoscope was introduced in this country shortly after the middle of the century.[7] Joseph O'Dwyer perfected intubation in 1880. William E. Horner (1793-1853), a Virginian who for years occupied the chair of anatomy at the University of Pennsylvania, was the discoverer of the *tensor tarsi* muscle and devised an operation for the cure of ectropion of the lower eyelid.[8] John Peter Mettauer of Prince Edward County performed not less than 800 operations for cataract and enjoyed a wide reputation as an ophthalmic surgeon.

[6] Packard: History of Medicine in the United States, v. 2, p. 1151.
[7] In 1869 the catalogue of the Medical College of Virginia advertised clinical instruction under Dr. Cunningham in the use of the ophthalmoscope and the otoscope.
[8] American Journal of the Medical Sciences, 1837, v. 21, p. 105.

An early oculist in Virginia was Howell Lewis Thomas (1824-1877) of Richmond, an editor of the *Virginia Medical Journal* and demonstrator of anatomy in the Medical College of Virginia. The *Graefe-Saemisch Handbuch* (1874-80), greatest of ophthalmological works, quotes from an article by Thomas on exophthalmic goitre, which was said to have appeared in the *Richmond and Louisville Medical Journal*. James Bolton (1812-1869), also of Richmond, was another early oculist of note. His treatise on strabismus appeared in 1842, and for a number of years was widely quoted.

The birth of ophthalmology as a specialty in Virginia may be more properly dated from the organization of the Richmond Eye, Ear, and Throat Infirmary and Dispensary in 1879. Here Joseph A. White, Phil Taylor, Charles M. Shields, John Dunn, and J. F. Woodward did pioneer work. It is interesting that in the first fifteen years of the institution there were 323 cataract extractions against 138 tonsillectomies.

Joseph A. White, founder of the Infirmary, made other lasting contributions to the development of his specialty in Virginia. He was a constant contributor to current medical literature, more than two hundred articles dealing with various phases of his specialty having come from his pen. He invented a self-retaining palate and tongue retractor, and a galvano-cautery handle with various attachments to operate upon the nose and throat. He was the originator of an ointment containing bichloride of mercury in vaseline, widely used for sterilizing the eye. He was at one time chairman of the ophthalmic section of the American Medical Association and in 1914 became president of the American Laryngological, Rhinological and Otological Society. Born in the city of Baltimore, April 1849, he graduated in medicine from the University of Maryland and did postgraduate work in Europe before becoming professor of ophthalmology and otology in Washington University, Baltimore. In 1879 he moved to Richmond and in 1893 became professor of diseases of the eye in the University College of Medicine.[9]

In the Medical College of Virginia Francis Deane Cunningham gave clinical lectures, 1880-1881, on diseases of the eye and ear. Charles M. Shields began lecturing on diseases of the eye, ear, and throat in 1883 and became full professor in 1893. John P. Davidson succeeded him in 1897. Diseases of the nose first received attention in the eye, ear, and throat clinic of the Dispensary in 1895 under Dr. D. A. Kuyk. At the University of Virginia following the lead of James L. Cabell, Paul B. Barringer organized an eye clinic in the early nineties. H. S. Hedges, returning from study in New York, became identified

[9]At the same time Dr. John Dunn assumed the chair of diseases of the ear, throat, and nose.

with this clinic. From 1897 to 1905 he was in charge of the eye and ear clinic, which since that time has greatly expanded until it now admits more patients than any other out-patient department.[10]

William H. Baker (1857-1898) of Lynchburg was a successful eye, ear, and throat specialist from the time of his location there in 1882. He contributed articles to many medical journals. In Norfolk, Harry L. Myers limited himself to the same specialty.

The *Transactions of the Medical Society of Virginia* during the last decade of the century show that the Society was literally bombarded by talks and articles on this specialty. Joseph A. White, Charles M. Shields, Alfred C. Palmer, Philip Taylor, and John Dunn were the chief contributors.

CLINICAL PATHOLOGY

The medical profession displayed a curious disregard for the possibilities of the microscope for many years after its discovery.[11] The French and the English were particularly slow in making use of it. In Virginia the first employment of the microscope was in the medical colleges, as one would expect. The catalogue of the Medical College of Virginia for 1848-1849 stated that in the courses in anatomy and physiology under Carter P. Johnson students would examine "personally, with the aid of the microscope," the fluids and tissues of the body. In 1851-1852 Jeffries Wyman is described as giving instruction with the microscope; in 1882, Otis F. Manson used it; and in 1883 H. H. Levy is said to have made "very free employment of the microscope" in his classes. In 1896 students of histology and pathology were required to prepare their own microscopic sections. Histology, mentioned in the catalogue as early as 1857, was emphasized in 1870, and in 1894 was given first-year students as a part of the course in pathology and bacteriology. It was 1897, however, before a professorship of histology, bacteriology, and pathology was created.[12]

At the University of Virginia as early as 1868 the "microscopical examination of Animal Products, urine, blood, etc." formed part of an optional course given to medical students for more than twenty years by Professor Mallet, and in 1886 Professor William C. Dabney began to offer elective "classes in Practical Microscopy," said to have been popular with his students. To Richard H. Whitehead in the session of 1888-1889 was assigned the teaching of clinical microscopy, and at the same time, as a part of Dr. Barringer's course

[10] Personal communication from Dr. H. S. Hedges, of Charlottesville.
[11] Kircher's *Scrutinium pestis* appeared in 1658.
[12] Catalogues of the Medical College of Virginia, 1848-1900.

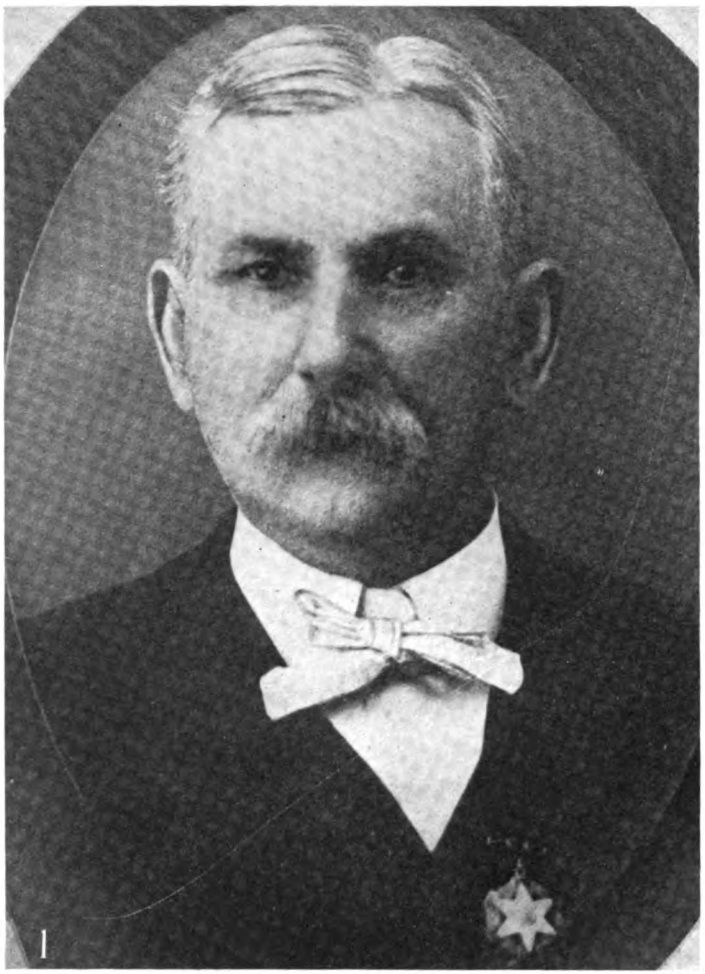
in physiology, lectures on histology were made more practical by the use of the microscope. In 1892 Professor Tuttle taught histology and bacteriology as separate subjects.[13]

From the catalogues of these two institutions one would judge that the microscope played a large part in medical teaching, but in the Medical College of Virginia from 1868 to 1882 the only reference to teaching with the microscope is the listing of these instruments each year as a part of laboratory equipment, and as late as 1889 this mode of teaching at the University of Virginia was described by Dr. Davis as "a flickering taper of clinical microscopy."[14]

Outside of the colleges there was in Richmond as early as 1879 a group of men interested in science and the microscope as a means of investigating many of the phenomena of nature. In order to compare their individual work and to plan new fields for study they were organized into the Richmond Microscopical Society. The membership consisted of the Reverend Paul Huber, a German Lutheran minister; Dr. William R. Weisiger, a practitioner of Manchester; Hugh Blair, the pharmacist; Dr. W. B. Gray; Dr. M. A. Rust;[15] G. A. Peple, father of Dr. W. Lowndes Peple; and probably Thomas Christian, C. L. Peticolas, Henry Froehling, the chemist, and W. H. Harbaugh, the veterinarian. The son of one of these early microscopists remembers the crude microscope with which his father worked and the slide boxes of diatoms and parts of insects that were consumed when the old University College of Medicine burned. He remembers his older brothers being sent into ponds and swamps where the miasma of malaria was supposed to lurk to collect turtles, frogs, tadpoles, and crawfish, to see if any of these denizens of the marsh showed anything in their blood that might cause the disease.[16]

In October 1878 William R. Weisiger of Manchester reported his work in microscopy and histology before the Medical Society of Virginia.[17] Beginning by stating that he would report "little else than what I have been to some extent engaged in studying myself," he proceeded to demonstrate to the fellows the tendon of an opossum's tail stained with osmic acid, the mesentery of the lizard stained with purpurine, a section of the eyelid of a calf, a reptile's lungs,

[13] Catalogues of the University of Virginia, 1859-1892.
[14] Davis: History of the Medical Department of the University of Virginia, p. 12.
[15] Dr. Rust read a paper on zymotic diseases before the Medical Society of Virginia in 1885, in which he showed that he was thoroughly abreast of bacteriology, prophesying that the bacterial cause of pneumonia, measles, scarlet fever, diphtheria, and erysipelas would shortly be found. Transactions of the Medical Society of Virginia, 1885, p. 186.
[16] Personal communication from Dr. W. Lowndes Peple, of Richmond.
[17] Transactions of the Medical Society of Virginia, 1878, p. 402.



JAMES F. THOMPSON
First President of the State Dental Society.

SADIE HEATH CABANISS
Pioneer Trained Nurse.

ST. MEMIN PORTRAITS OF VIRGINIA PHYSICIANS

1. William Carter, of Richmond. 2. James Jones, of Amelia and Nottoway Counties.
3. Elisha de Butts, of Alexandria. 4. George Watson, of Richmond.

a section of the nerve cells and tracts of a frog stained with gold platinum, sections of blood vessels and sections of the stomach of a terrapin stained with picro-carmine. He concluded by saying: "Not many years ago hardly a microscopic preparation was made in Virginia. Now there are many earnest workers in microscopy. I would particularly allude to my friend, Mr. Peticolas, who makes as fine diatome work as can be seen anywhere. . . . Also to Dr. W. C. Dabney, of Charlottesville who is earnestly at work in histology.[18] Others in Richmond have procured good instruments, and are using them in pathological investigations." Dr. Ephraim Cutter of Boston, who was assisted by Dr. Weisiger in his demonstrations of micro-photographs before a meeting of the Medical Society of Virginia, called him an honor to Virginia; and the *Virginia Medical Monthly* commented: "The progress in micrology made by a 'Virginia country doctor' in active practice and middle life, is very encouraging to those who would solace advancing years with the microscope."[19]

In 1879 Richard H. Lemmon of Lynchburg, "late instructor in Microscopy and Practical Histology at the University of Virginia," wrote on *Organic Forms in their Relation to Systemic Disease.*[20] Dr. S. P. Cowardin, the dentist, who enjoyed a nation-wide reputation in the field of ground sections of hard materials, such as the teeth and bone, was introduced to the use of the microscope by Paul Huber as early as 1878. Returning to Richmond in 1893 he found the Richmond Microscopical Society dissolved. But Page Massie, professor of pathology and bacteriology in the Medical College of Virginia (1893-1897) was conducting a very good laboratory in bacteriology and was engaged in the study of the urine and blood. In 1897 E. C. Levy succeeded Dr. Massie and for a number of years confined himself entirely to laboratory diagnosis and teaching. He was probably the earliest physician engaged exclusively in this specialty in Richmond. In 1895 the use of antitoxin in the treatment of diphtheria and the present culture methods of diagnosis were introduced into the state. However, as late as 1897 a paper on bacteriology read before the Medical Society of Virginia provoked heated discussion in which many members frankly stated their doubt of the germ theory of disease; and the next year the Society listened to a paper entitled *Do Bacteria Produce Disease?* which showed that while the writer, Dr. Levy, believed they did, he realized that many of his fellow physicians still thought otherwise.[21]

[18] This subject was taught at the University of Virginia as part of Dr. Cabell's course on physiology as early as 1859, was particularly emphasized by him after 1886, and by Barringer, who succeeded him in 1889. Catalogues of the University of Virginia.
[19] Virginia Medical Monthly, 1879-'80, v. 6, p. 77.
[20] Virginia Medical Monthly, 1879-'80, v. 6, p. 180.
[21] Virginia Medical Semi-Monthly, 1898-'99, v. 3, p. 355.

Previous to 1895 Dr. Edward C. Smith was engaged in making microscopic sections and in doing sporadic clinical pathology in Richmond.

Moses D. Hoge, Jr. (1861-1920), a graduate in medicine of the University of Heidelberg, enjoyed a reputation as a clinical pathologist, was professor of histology, pathology, and urinology in the University College of Medicine, and was the author of two little works, *Diagnostic Urinalysis,* 1896, and *Outlines of Histology,* 1897. He advertised in 1894 his ability to examine the urine, sputum, and other pathological specimens chemically and microscopically. His fee was $5.00.[22]

Hugh Blair, well-known pharmacist of Richmond, began the pathological examination of urine as a side line about 1885. In 1887 he began to advertise in the medical journals, published a number of articles in the *Virginia Medical Monthly,* and in 1889 was allowed to read a paper before the Medical Society of Virginia on *Diagnosis By Means of Urinary Examination.*[23]

Charles M. Blackford of Lynchburg wrote on *Bacteria In Disease* in 1892;[24] L. B. Anderson of Norfolk, on the *Present Status of Bacterial Pathogenesis* in 1893; and Stuart MacLean and E. C. Levy early emphasized the value of clinical examinations of the blood in surgical diagnosis.[25]

ROENTGENOLOGY

Wilhelm Konrad Roentgen, professor at Würzburg, reported his discovery of the X- or Cathode-rays, November 8, 1895. The announcement of this discovery created great excitement in America, and in Virginia the departments of physics in the various colleges were soon busily verifying the phenomena and displaying, chiefly as matters of curiosity, X-ray pictures. As far as we know the first X-ray pictures made in Virginia were taken by James H. Corbitt, at that time an instructor in physics at the University of Virginia. Writes Mr. Corbitt: "As soon as a copy of the issue of the *London Electrician* containing Roentgen's announcement of his discovery was received by me at the University, I began experimenting with the electrical apparatus we had in the physical laboratory, and....made some X-ray pictures, among them being a picture of a hand, a picture of a frog, and a picture of a purse containing coins. . . . My first experiment was, I believe, with a hand taken from a body in the dissecting hall. Later I made a picture of Prof. W. H. Echols' hand showing

[22] Virginia Medical Monthly, 1894-'95, v. 21, advertisement.
[23] Transactions of the Medical Society of Virginia, 1889, p. 172.
[24] Transactions of the Medical Society of Virginia, 1892, p. 108.
[25] Transactions of the Medical Society of Virginia, 1899, pp. 114, 122.

two or three fractured fingers, one of which he did not know was fractured, nor did the doctors know it, until after I had made the picture.....His hand was broken in fighting the fire that consumed the Rotunda and what was known as the old Annex. Prof. Francis H. Smith, the head of the Department of Physics, told me that the X-ray work I did was the first done in the South..."[26]

Similar early experiments were carried out at Washington and Lee University. In November 1896 Dr. Robert Glasgow at Lexington recorded the X-ray of a foot: "I requested that Professor Moreland, of Washington and Lee University, should examine it by means of the excellent X-ray apparatus he has in his laboratory. Two radiographs were taken—the first with the tube over the dorsum of the foot and the plate on the plantar surface; the second with the tube over the outside of the foot with the plate on the opposite or inner side."[27]

Professor J. H. C. Bagby lectured at Hampden-Sidney College on the X-ray in the spring of 1898 and about the same time, employing an apparatus of his own making, took successful pictures of a bullet imbedded in the arm of a Farmville policeman.[28]

Physicians were quick to employ the new apparatus, and a number of private offices were soon equipped, some with big static machines, others with the high-tension coil type. Probably the earliest machine to be operated in the state by a physician was assembled and used by William H. Taylor at the Medical College of Virginia. It was not used for clinical diagnosis but for exhibition and classroom instruction. Prior to July 1897 Stuart McGuire owned a coil machine and shortly afterwards published an article illustrated with roentgenograms of a foreign body in a hand with a backward displacement of the elbow.[29]

On February 12, 1897 Charles G. Cannaday of Roanoke wrote that he had been using an X-ray machine as early as the spring of 1896. "The X-ray apparatus in use at my private hospital, Rebekah Sanitarium, consists of a Ruhmkorf's induction coil, a vibrator, a Crooks' tube, connecting wires, and a generator. Large and powerful cells can be used as a means to generate the current, or if the Edison system of a continuous current is at hand, it can be arranged to do the work.

". . . No progressive surgeon can afford not to have a well-equipped X-ray outfit.

[26] Personal communication from Mr. James H. Corbitt, attorney-at-law, Suffolk, Virginia.
[27] Virginia Medical Semi-Monthly, 1896-'97, v. 1, p. 479.
[28] Personal communication from Dr. J. H. C. Bagby, of Hampden-Sidney College.
[29] Bi-Monthly Bulletin, University College of Medicine, 1897, v. 2, No. 4.

"Mr. R. had suffered from tuberculosis of the hip and foot for several years; it involved all the bones of the foot and the head of the femur . . . I finally decided that I would try and obtain a shadowgraph, which I did. The patient was given a long exposure. Several months later he appeared, having discarded one of his crutches. On examining his foot, I found that all the fistulous openings had entirely healed, and all the tenderness had disappeared.

"I hope that we are yet in our infancy as to the value of this method."[80]

About the same time J. M. Whitfield and W. T. Oppenhimer of Richmond were operating machines in their offices. Dr. Oppenhimer's machine was made by Van Houten and Tenbroeck, and cost between six and seven hundred dollars.

Ennion G. Williams was the first physician in Virginia to devote himself exclusively to X-ray work.[81] While taking postgraduate work at Polyclinic in Philadelphia he became interested in this specialty and returned to Richmond to follow it until he went into public health work, not before sustaining serious burns (of his hands), like many other early workers. Dr. Williams's machine was made by Heinz. The coil is in the possession of Charles M. Hazen, who succeeded him as a teacher in the Medical College of Virginia. Dr. Hazen began the practice of roentgenology in 1898. In 1902 Alfred L. Gray began his career as an X-ray specialist, operating a White and Bartlett static machine at the old Virginia Hospital. Shortly afterwards he demonstrated a bullet in the neck of a negro in the penitentiary, and the picture appeared in the newspapers. One of his earliest contributions to medical literature dealt with the demonstration of a safety pin in the lower end of the œsophagus of a child. Other pioneer Virginia roentgenologists were James Hunter of Norfolk, Joseph Osborne of Petersburg, and W. A. Slaughter of Lynchburg. Slaughter burned himself severely and died of the effects.

PSYCHIATRY

Some of the earliest contributions to the care of the insane were made in Virginia. The first insane asylum in the country was built at Williamsburg in 1773. The earliest physicians attached to this institution were John De Sequeyra, Philip Barraud, John M. Galt, and Alexander D. Galt. The position of superintendent was created in 1841, and from that time until 1900 it was held successively by John M. Galt II, P. Wager, Leonard Henley, R. M. Garrett, A. E. Peticolas, D. R. Brower, Harvey Black, Richard A. Wise, James D. Moncure, and L. S. Foster. The Galts in particular should be remembered for con-

[80] Virginia Medical Semi-Monthly, 1896-'97, v. 1, p. 597.
[81] He was also the first to employ radium.

tributions to psychiatry. They were careful students of the subject. Alexander Dickie Galt (1777-1841) instituted the humane treatment of the insane long before the time of Conolly and Tuke, and his son John Minson Galt II, who was well trained by study abroad and at home, published several works of value on insanity. Harvey Black, superintendent at Williamsburg from 1876 to 1882 and at Marion from 1887 to 1888, was remarkable for his personality and attainments, as was Robert J. Preston,[82] who succeeded him at Marion.

Francis T. Stribling (1810-1874), physician and superintendent of the Western Lunatic Asylum from 1836 to 1874, was one of the first psychiatrists in this country to grasp the possibilities of humane treatment of the insane. By supplying occupation and amusement to the sufferers and minimizing the circumstances productive of anger and passion, he offered a great inducement to proper behavior and self-control. He originated the system of furloughs now universally adopted by institutions of this character. William H. Hamilton, his assistant, introduced nasal feeding for refractory patients in 1859. Dr. Stribling, referring to this innovation, said: "In so far as we know, it had failed to receive the endorsement of anyone in charge of an institution for the insane in the United States."[83] The psychiatrists to succeed Dr. Stribling in Staunton were Robert F. Baldwin, 1875-1880, Archibald M. Fauntleroy, 1880-1886, Robert S. Hamilton, D. B. Conrad, 1886-1889, and Benjamin Blackford, 1889-1906. Galt and Stribling were both active in the Association of Superintendents and Physicians of Hospitals for the Insane, organized in 1844, and served on a committe, that first year, to study the care of colored insane.

NEUROLOGY

The first textbook in the United States on neurology was a *Text Book of Diseases of the Nervous System,* by William A. Hammond, published in 1871. The American Neurological Society was organized in 1874, but aside from S. Weir Mitchell, J. S. Jewell, J. J. Putnam, and a few others, not many men in this country limited themselves to this branch of medicine before 1900.

In Virginia the subject was recognized in the medical schools as early as 1886, Edward C. Smith having charge of this branch of the dispensary in the Medical College of Virginia. Richard H. Cunningham, J. P. Massie, and H. H.

[82] Robert J. Preston in 1898 read a paper before the Medical Society of Virginia, reviewing the progress made in the care of the insane in Virginia in the preceding ten years. He showed that the insane population in state hospitals had increased from 1,605 to 2,504, and urged the better instruction of students in medical colleges in the subject of insanity. Transactions of the Medical Society of Virginia, 1898, p. 261.

[83] Hurd: Institutional Care of the Insane in the United States and Canada, v. 3, p. 726.

Levy gave clinical lectures on diseases of the nervous system in the College between 1893 and 1900. In the University College of Medicine Edward McGuire held the chair of diseases of the nervous system for one year. J. Allison Hodges taught nervous and mental diseases after 1894 and in his practice emphasized this subject. No one in Virginia, however, devoted himself entirely to neurology before Beverley R. Tucker took up that specialty in 1907.

PEDIATRICS

A scattering of creditable articles on diseases peculiar to children had been published in America before 1825. In that year two books on pediatrics appeared, one by George Logan of Charleston, South Carolina, and the other by William P. Dewees of Philadelphia. It was 1860, however, before pediatrics was recognized in America as a specialty deserving of recognition in the curriculum of medical colleges. In this year Abraham Jacobi assumed in the New York Medical College the first special chair of pediatrics in this country. The pediatric section of the American Medical Association was organized in 1880 and the American Pediatric Society in 1888.

We are prepared to find pediatrics as a specialty developing tardily in Virginia. In the Medical College of Virginia, from its beginning in 1838, diseases of women and children were taught as a part of the department of obstetrics until 1868 when they became a separate chair. It was 1897 before a chair of pediatrics was created, with Charles A. Blanton as the first professor. At the organization of the University College of Medicine in 1893 Paulus A. Irving was assigned to the teaching of diseases of children. The teaching of pediatrics first became a part of the curriculum of the medical department of the University of Virginia in 1892. Although separate chairs were established in the medical colleges, and children were frequently referred to the professors for diagnosis and treatment, no one in Virginia devoted himself exclusively to pediatric practice before 1900. McGuire Newton in Richmond and Lawrence T. Royster in Norfolk were the first practitioners in the state to limit themselves exclusively to this subject.

ORTHOPEDIC SURGERY

Following the pioneer work of Delpech, Stromeyer, von Heine, Lorenz, and Hoffa in Europe, American orthopedic surgery in the hands of the remarkable group of New England orthopedists, Bradford. Lovett, Sever, and Abbott, made a great name for itself in the latter years of the century.

Lewis A. Sayre of New York appeared before the Medical Society of Virginia in 1878 with a paper on spondylitis and lateral curvature. In 1889 John

Ridlon discussed hip-joint disease before the Society. In 1891 A. M. Phelps of New York performed for the benefit of the delegates "Phelps' Operation on Two Cases of Talipes Equino-Varus." A. R. Shands of Washington in 1897 read before the Society a paper dealing with deformities of the knee joint. The profession of the state was evidently interested in what was taking place in this field, although the general practitioner and the general surgeon were not yet ready to relinquish a type of practice that since 1900 has passed largely into orthopedic hands. There were no specialists in orthopedic surgery in Virginia before 1900, though Thomas P. Roy was lecturing on the subject in the Medical College of Virginia between 1893 and 1896. Robert F. Williams succeeded him, and in 1899 William P. Mathews was made professor of orthopedics. In the University College of Medicine no recognition was given the subject until 1899, when J. W. Henson became demonstrator of orthopedic surgery. The subject was not taught at this time at the University of Virginia.

GENITO-URINARY SURGERY

In Virginia before 1900 general surgery still regarded the genito-urinary tract as its field, and the treatment of syphilis and gonorrhœa was still unquestioningly the business of the general practitioner. There were no genito-urinary specialists. Stone in the bladder and urethral stricture were the chief subjects of surgical interest in the early decades of the century, and J. P. Mettauer, P. C. Spencer, and Charles Bell Gibson were prominently identified with their treatment. Although J. Alexander Waddell of Staunton, assisted by his father, Dr. Addison Waddell, as early as 1853 performed a successful suprapubic puncture for retention of urine,[84] Hunter McGuire's use of the procedure many years later in the treatment of prostatic hypertrophy received general recognition. Still later Lewis Bosher's name was identified with operations upon the male organs, and Lewis Wheat, also of Richmond, paid particular attention to the venereal side of urology. J. W. Long probably employed the first cystoscope in Virginia. He was using this instrument in Richmond before his departure for North Carolina in 1897.

DERMATOLOGY

The contribution of American dermatologists during the Nineteenth Century was slight compared to that of Robert Willan and Thomas Bateman in England, Jean Alibert in France, von Hebra, Sabouraud and Unna in Germany. The

[84] Stethoscope, 1854, v. 4, p. 516.

specialty as a whole made great progress. Many new clinical entities were recognized, the importance of parasites in the development of cutaneous infections was demonstrated, and a modern classification of cutaneous diseases based upon histological changes was advanced.

Skin diseases were recognized in the dispensary of the Medical College of Virginia as early as 1883, when one of the clinics was devoted to "diseases of the nervous system and skin." From 1893 to 1896 F. H. Beadles was in charge of a separate skin clinic in the dispensary. After 1896 he was instructor in skin diseases in the College, while William P. Mathews was lecturer. In the University College of Medicine William T. Oppenhimer occupied the position of clinical professor of skin diseases from 1893 on. Arthur Jordan taught dermatology here also and wrote a number of articles dealing with diseases of the skin. There were, however, no specialists in dermatology engaged in private practice in Virginia prior to 1900.

CHAPTER IX

ALLIES

I. DENTISTRY[1]

MODERN dentistry is the product of the Nineteenth Century. Until well into the fourth decade of the century there had been few changes in dental practice for two hundred years. There was no real dental profession. Teeth were neglected until they fell out or were pulled out. Toothache was treated by local applications or by extraction, and physicians were called upon for both. The work of the pioneer dentists—John Baker, Paul Revere, John Greenwood, Joseph La Moyeur, and others—is not to be forgotten, but such men were few in number. In general it might be stated that before 1830 dental practice was taken care of by itinerant practitioners, traveling through the countryside from town to town. Many of these itinerants were blatant quacks, but some of them were unquestionably well trained and competent. Some were of British origin and held membership in the Royal College of Surgeons. Others were from France, where progress in dentistry had been particularly rapid and represented the best that was known. There were other practitioners of fixed residence and small training, who either attempted to cover the entire field of dentistry or limited themselves to the mechanical phases of making and applying dentures. In the larger cities there were a few dentists who had graduated in medicine but for one reason or another had drifted into dental practice. The term surgeon-dentist was generally applied to the profession until 1839. After that they preferred to be known as dental surgeons. Dental practice was still primitive. Ideas of the cause of disease were vague, scurvy of the gums was glibly referred to and commonly treated by cauterization; in fact, the actual cautery was still a favorite treatment for toothache. The implantation of dead teeth and the transplantation of living teeth was still being practised. The turnkey of Gargenot was still the popular instrument of extraction. Lead was the common material for filling teeth, though gold was also popular. The dowel crown was the favorite method of tooth replacement. Partial dentures were wired to adjacent teeth, and full dentures equipped with springs were still in vogue.[2]

[1] Much of the information in this section was gathered for the author by Drs. John Bell Williams and Harry Baer, of Richmond.

[2] Such dentures were worn by George Washington.

After 1830 dentistry in the United States began its autonomous development and rapidly took the leadership away from France and Great Britain. The appearance of Solomon S. Fitch's textbook, the founding of the first dental school in the world (The Baltimore College of Dental Surgery), the organization of the American Society of Dental Surgeons, and the appearance of the *American Journal of Dental Science,* all in 1840, marked the progress in this direction. Since 1840 a phenomenal development in dentistry has occurred in this country, lifting the profession to a position of great importance.[3] Yet there have been critics, chiefly in the profession's own ranks, who, while admitting success in the field of mechanical dentistry, have pointed out the restricted and specialized nature of dental teaching and have lamented the fact that it was not built upon a general scientific foundation. "As a result," according to a recent critic, "dentistry finds itself master of a technical procedure to a wonderful degree but unable to advance through research to a scientific foundation."[4] Possibly this was due, in part at least, to the practice of patenting inventions and improvements, to the habit among certain dental educators of participating in the ownership of dental manufacturies and supply houses, and to the influence of the trade journals these houses put out. Not the least evil which dentistry had to combat was the proprietary dental school.

Dentistry in Virginia for the most part followed the course of dental development in the nation. The features of dental practice already described characterized the profession in this state. Mordecai, writing in 1856, says of Richmond: "Now-a-days the profession of dentistry gives employment in our city to a score of practitioners. In the days of my boyhood, only one Tooth-drawer, who probably never heard the word dentist, did all the work and all the mischief in the dental line."

Shortly after the national awakening the Virginia Society of Surgeon-Dentists, designed to "distinguish and reward merit and discountenance and expose quackery and charlatanism," was organized in Richmond, December 1842.[5] The act which incorporated the society, February 3, 1845, declared that "Samuel Lethbridge, John G. Wayt, James D. M'Cabe and others . . . have formed themselves into a society under the title of 'The Virginia Society of Surgeon Dentists,' whose objects are the promotion of dental science, the establishment of a library and cabinet of anatomical preparations, for the purpose of intro-

[3] In 1929 there were 61,000 dentists in the United States.
[4] Frederick C. Waite: a series of articles on the History of Dentistry, American Dental Surgeon, April, May, June, July, and September 1929.
[5] Koch: History of Dental Surgery, v. 2, p. 866.

ducing a sound system of dental education."[6] This was the first state dental society organized in the United States.

It is uncertain how long the society survived, but in 1845 it took sides in the controversy raging around the "royal mineral succadaneum" and went on record as believing "the use of all pastes and cements of which mercury is a part, entirely unfit for, and highly objectionable as fillings for carious teeth, and that the use of them in dental practice is empirical, and is hereby declared to be malpractice."[7]

The first officers of this society, S. Lethbridge, president; John G. Wayt, vice-president; James D. McCabe, secretary, and S. M. Shepherd, treasurer, together with W. W. H. Thaxton, R. N. Hudson, John McConnell, T. B. Hamblin, and William McKenney, constituted the executive committee.

During these years the practice of inserting professional cards in the newspapers was generally followed by the dental profession of Virginia. The *Petersburg Daily Intelligencer*,[8] April 21, 1856, carried the following dental announcements:

DR. WM. H. ETHERIDGE, SURGEON DENTIST,

Having permanently located in this city, offers his PROFESSIONAL SERVICES to the public generally. He has taken rooms on Bollingbrook Street, No. 14, next to Falconer and Plummer's Hardware Store, and is fully prepared to attend to all calls with which he may be favored.

TEETH filled with fine Gold and warranted to remain permanent and useful for life. All other operations performed in the most skillful manner and warranted to give satisfaction.

Particular attention paid to Children's Teeth and Deformities treated with success.

Also will insert incorruptible Artificial Teeth from one to an entire set, on the most improved principle, and in a manner that, for beauty and comfort, cannot fail to please.

Diseases of the Palatine Organs treated with success.

Best of references given.

A. WHITEHEAD, DENTIST,

Office at the Corner of Third and Bollingbrook Streets, will attend personally to his profession. He has received from the North Carolina State Fair the highest Premium and Diploma for Mechanical Dentistry. Also, the highest

[6] Acts of Assembly, 1844-'45, p. 109.
[7] Koch: History of Dental Surgery, v. 2, p. 866.
[8] Daily Intelligencer, Petersburg, April 21, 1856.

Premium from the Virginia and North Carolina Fair, and Silver Medal from the Virginia Mechanics' Institute, Richmond.

The Virginia State Dental Association was organized in Richmond on November 3, 1870. Its first president was James F. Thompson. Other officers were H. McG. Grant, W. M. Dorsett, T. M. Henley, George F. Keesee, Jud. B. Wood, James A. Chapman, and F. A. Jeter. In 1910 the membership of the Society was 140. Two local dental societies were in operation during this period, the Richmond Dental Society, organized in the office of Drs. J. W. and Edward Eggleston on East Main Street, November 22, 1894, by twenty-two dentists of the city,[9] and the Virginia Tidewater Dental Association, organized in September 1898, with J. F. Reed of Norfolk as president.[10]

Prominent in the state society from its founding was George Fisk Keesee (1842-1924). He was a native of Richmond and had served as a volunteer in the Confederate army. From the life of a soldier he turned to that of a student of dentistry at the Baltimore College of Dental Surgery, from which he graduated in 1869. Shortly afterwards he settled in Richmond, beginning a long professional career of great influence. He became an inspiring leader in his profession and was loved and admired by all who knew him. For fifty years he was secretary of the State Dental Association, as well as being on two occasions its president. He was one of the founders of the Richmond Dental Society.[11]

Another organizer of the society was its first president, James F. Thompson (1835-1912), a native of Baltimore, graduate in medicine from the Baltimore College of Physicians and Surgeons, and in dentistry from the Baltimore College of Dental Surgery. In Fredericksburg, where he practised his profession, Dr. Thompson was long remembered as a popular and useful citizen, prominent in fraternal and church activities. He was for a number of years a member of the State Board of Dental Examiners and at the time of his death was president of the local dental association. His presidential address before the state society in 1871 was concerned with the enactment of laws "requiring all dental practitioners to be thoroughly educated and proficient before entering upon the practice of their profession." He regretted the "influx of many ignorant and unskilful operators doing such miserable work, imposing upon the credulity of a confiding people."[12]

[9] Baer, Harry: Historical Sketch of the Richmond Dental Society, Bulletin of the Virginia State Dental Association, January 1931.
[10] Koch: History of Dental Surgery, v. 2, p. 1046.
[11] Baer, Harry: Life and Character of Dr. George Fisk Keesee, Dental Cosmos, July, 1925.
[12] Information furnished by his daughter, Miss Mary E. Thompson, of Fredericksburg.

It was not until February 26, 1886 that the first law regulating the practice of dentistry in the state of Virginia was passed. It limited the practice of dentistry to physicians, surgeons, graduates of dental colleges, and holders of certificates from the State Board of Dental Examiners. But, with great evidence of feeling, it came to the rescue of all sufferers from toothache by providing that "nothing herein contained shall prevent any person from extracting teeth for any one suffering from toothache."[13] This law also created the State Board of Dental Examiners, consisting of six dentists appointed by the Governor for terms of three years each. The Board was authorized to grant certificates to applicants who had passed satisfactory examinations and to see that the provisions of the law were executed. The presidents of the Board since 1886 have been J. Hall Moore of Richmond, J. V. Haller of Wytheville, and H. Wood Campbell of Suffolk. Amendments to the act were made in 1890, 1894, and 1898.

The first X-ray films of teeth to be taken in Virginia were made by Dr. A. L. Gray of Richmond. The plates were prepared from ordinary kodak films cut to the size of the mouth, then exposed, and developed in the usual way.

Dental education in Virginia made a slow start. This was due in part to the proximity of the excellent school in Baltimore. This college graduated three men in its second class, and two of them were from Virginia, J. B. Savier and W. W. H. Thaxton.

Thaxton (1820-1899) was a native of Prince Edward County, Virginia, and began his career at the Medical College of Virginia, where he graduated before entering the Baltimore College of Dental Surgery to receive his D. D. S. in 1842. He immediately located in Farmville, where he was long a familiar and respected figure, serving as mayor of the town for fifty years and known as "The Lord Chesterfield of the Dental Profession." Through dental periodicals, to which he was a constant contributor, and through the state dental association, in which he was a prominent member, he exerted lasting influence on his profession in Virginia. He was one of the founders of the old Virginia Society of Surgeon Dentists and was several times president of its successor, the Virginia State Dental Society, as well as president of the Virginia State Board of Dental Examiners. He invented in 1850 a right-angle drill-stock with bow-drill.[14] He died in his eightieth year, honored and admired throughout the state.[15]

On October 3, 1893 the first formal dental teaching in Virginia was inaugurated, when a faculty of Richmond physicians and dentists was organized as the Department of Dentistry of the University College of Medicine. Lewis M.

[13] Acts of the Assembly, 1885-'86, p. 235.
[14] American Journal of Dental Science, second series, v. 1, p. 101.
[15] Thorpe: History of Dental Surgery, v. 3, p. 504.

Cowardin became dean of the faculty, which was composed of seven physicians and one other dentist, Charles L. Steel. Cowardin taught the principles and practice of dentistry, together with clinical and oral surgery. Steel taught orthodontia and dental prosthesis. A. R. Bowles and A. L. Stratford acted as demonstrators. It is interesting to note that, with the exception of Stratford, all of the dentists on the faculty were graduates in medicine as well as in dentistry. At the time of its organization this was the only school of dentistry east of Nashville between Washington and Atlanta. There were twenty-two matriculates the first session. The teaching of dentistry in a medical school on a parity with other branches was a new development in the South. A similar though unsuccessful attempt had been made by Horace H. Hayden and Chapin A. Harris when the Baltimore College of Dental Surgery was organized years before, but forty years had done much to soften the prejudice that had long kept dental and medical education apart.[16]

In 1897 the Medical College of Virginia followed suit by organizing a Department of Dentistry under Henry C. Jones, D. D. S. This faculty, also, was top-heavy with physicians, who outnumbered the dentists five to two. Jones taught operative, prosthetic and clinical dentistry. Thomas R. Marshall, M. D., D. D. S., a member of the adjunct faculty of the College, was professor of the principles of dentistry, oral surgery, and special anatomy of the head. Shortly afterward Edward P. Wright and Richard C. Walden were added to the dental faculty. In lieu of a high-school or college diploma, admission to the department was by examination. There was but one graduate of the school in 1898, Sidney Brook Perry of Lewisburg, North Carolina.[17]

II. PHARMACY[18]

Recent years have brought changes in the drug business as profound as in any other phase of medicine. The apothecary shop with its dazzling colored carboys and huge "specie jars" and gilded lids is a thing of the past. Charles Dickens declared they were the only bright spot to be found in London on a rainy night, and Sir James Barrie lamented the change, maintaining that "the chemists who are beginning to do without them in their windows should be told it is a shame." Other things have gone into the discard besides these external evidences of the mystery and art of the apothecary. Great has been the trans-

[16] Koch: History of Dental Surgery, v. 1, p. 586.
[17] Catalogue of the Medical College of Virginia, 1897-'98.
[18] A large part of the data upon which this account of pharmacy has been based was gathered for the author by Dean Wortley F. Rudd of the School of Pharmacy, Medical College of Virginia.

formation of the old-style apothecary shop into the modern, corner drug store with its soda fountain, tobacco counter, magazine racks, candy cases, telephone booths, and department-store appearance. The long rows of bottles, the ponderous scales, the huge iron mortar, the pungent odor of drugs of other days have given place to an exhibit of articles of every description for household use, and the drug business has been relegated to an obscure corner, where doubt rather than confidence in the skill of the apothecary is engendered. It was customary a century ago to dispense each dose of medicine in a separate bottle. The druggist of that period, whose knowledge of chemistry had turned him from the electuaries and confections of a still earlier day, took pride in the pills he rolled, the smoothness of his ointments, his shapely suppositories, as well as in the quality of his infusions, decoctions, and tinctures. Gone is the opportunity for pride in such matters. The discovery of the alkaloids, the advances in synthetic pharmacy, the dominance of enormous proprietary houses, and the growing tendency toward chain stores have substituted for the old preparations capsules, compressed tablets, and refined tinctures quite beyond the skill of the individual pharmacist.

In 1800 the quaint old apothecary shops of the preceding century still survived throughout Virginia. There were no schools of pharmacy. There was no American pharmacopœia. There was no association, no journals, and the shops were still in large measure in possession of physicians. The pharmacist's education was secured by apprenticeship. On the whole his position was not an enviable one. The historian, Mordecai, states that "in old times each doctor was his own pharmaceutist, keeping medicines in his office, which his students —if he had any—would prepare according to his prescriptions—if they understood them."

"There could not be employment for many apothecaries," he writes of early conditions in Richmond, "when physicians made up a large portion of their own prescriptions; but they obtained their medicines from these druggists. About the year 1800, there were but three—if I am correct—occupying the two corners and the centre of the square on Main between Thirteenth and Fourteenth Streets. The shop of the brothers Ternan (Irishmen) was at the lower corner, in a part of the same wooden house already twice mentioned as yet standing there. A visit to their shop might have rendered an emetic superfluous, so begrimed with dirt was it and its attendants; but they made a fortune. Crawford's, at the upper corner where the cannon stands erect, was quite a contrast in point of neatness; but he was less popular, though also from the Emerald Isle, and did not reap so rich a harvest. Duval, the sire and grandsire of apothe-

caries, occupied the central shop, and was among the first to prepare nostrums in the shape of anti-bilious pills, in opposition to Dr. Church. He also established a pottery and a manufactory of tiles for roofing, but with all his enterprise and industry, I doubt if his dirty rivals did not make the most money."[19]

Enterprising Benjamin DuVal was born in Gloucester County about 1712, the son of a Huguenot refugee. Settling in Henrico County, he became a large landowner and was made surveyor in 1764 and a justice in 1765. At his death in 1770 his drug business in Richmond was carried on by his namesake, the youngest of eight children, who left on his death in 1826 three sons, Philip (1789-1847), James, and Alexander (1803-1869). All of them became pharmacists of Richmond. Robert Randolph DuVal (1817-1875) and James Powhatan DuVal (d. 1884), sons of Philip, continued the business for another generation. Robert's store occupied various sites on Main Street, and his country home, Orapax, in New Kent County, is still in possession of the family. James Powhatan, as a member of the firm of DuVal & Norton, wholesale and retail druggists and chemists, did business at the corner of Tenth and Main. Their "Horse Tonic" is still manufactured in Richmond.[20]

One of the older Virginia pharmacies is Schmitt's Drug Store in Woodstock, established early in the last century and now well over a hundred years old. In Fredericksburg Hugh Mercer's apothecary shop, dating back to the Eighteenth Century, still stands, though only as a museum; and Bond's Drug Store, almost as old, is still in operation there. In Alexandria the Leadbetter Drug Store at King and Fairfax Streets has continuously dispensed drugs for a century; and Miller's Drug Store in Winchester, established by one Godfrey Miller shortly after he settled there in 1763, is now presided over by a scion of the same name.

In 1853 Virginia with a population of 1,500,000 supported 110 regular drug stores.[21] Twenty-two of these were in Richmond; nine in Petersburg; nine in Norfolk; eight in Alexandria; three each in Portsmouth, Charlottesville, Staunton, Lynchburg, Martinsburg, Salem, Farmville, Danville, Winchester, Harper's Ferry, Charles Town, Fredericksburg, and Leesburg; two in Buchanan, Harrisonburg, Abingdon, Shepherdstown; and one in Charleston, Fincastle, Elizabeth City County, Charlotte County, Marshall County, Nansemond, and Lewis County. Medicines were also stocked and sold to a limited extent by the country storekeepers in villages and rural districts. In the larger towns the United States Pharmacopœia was pretty generally employed by the druggists, but the editions were often antiquated. Great inconsistency existed in the use of the official

[19] Mordecai: Richmond in By-Gone Days, second edition, p. 225.
[20] Information secured by Dean W. F. Rudd from the DuVal family.
[21] In North Carolina at this time there were only seventeen drug stores.

weights. Of all the Richmond druggists in 1853 only eight were believed to use the troy weight. In Alexandria only about one-half employed the proper weight. In the larger towns physicians were in the habit of sending their prescriptions to the apothecary, although most of them still kept and supplied their own medicines as well.

The first pharmaceutical organization in this state was the Richmond Pharmaceutical Society. When it was founded is unknown, but it was operating in 1853 with a membership of twenty. It was established to promote good practice and to advance the interests of the druggists of the city, but was not designed to perform any educational functions—"nor do the members generally approve of its assumption of them. . . ." As one of its officers remarked: "The spirit of trade is too much in the ascendent to admit of those liberal views and sacrifices on the part of the present generation to benefit the rising one, which are absolutely necessary to uphold and cherish a college of pharmacy as an educational institution."

Ethical standards among the pharmacists at that time still left much to be desired. It was said that "quackery was greatly encouraged in Virginia," the ignorant classes being chiefly responsible for it. But the hated nostrums were also made popular by "the regular graduated physicians themselves," who continued to prescribe various "vermifuges and pectorals." Quack medicines, chiefly those for external use, had notably increased. But even at this early date there was a hopeful sign. Students returning from the North, where pharmaceutical schools had been established, became at once a wholesome influence. In the larger towns particularly there were already many Virginia pharmacists who could be referred to with pride.[22]

The earliest forward step in pharmacy in this country was the establishing of drug standards and the publication of the United States Pharmacopœia in 1820. There was a revision in 1830, followed by other revisions in each succeeding decade of the century. The first pharmacopœia was entirely the product of the medical profession, but later more and more responsibility was placed upon the pharmacist. At the present time the revision committee consists of thirty-three representatives of pharmacy and seventeen of medicine. So far as we know, with the exception of Charles Brown Fleet, Virginians have played no part in these revisions, although the first American Pharmacopœia, which appeared during the Revolutionary War and was designed primarily for military purposes, was compiled by a Virginian, Dr. William Brown of Alexandria.

[22] Virginia Medical and Surgical Journal, 1853-'54, v. 2, p. 339.

After 1850 rapid strides were made. The American Pharmaceutical Society was organized in 1852. The organization of state societies followed rapidly, and the immediate effect was a distinct group-consciousness and agitation for proper laws to regulate practice. In the national association, Alexander DuVal of Richmond, grandson of the first Benjamin, served as second vice-president in 1853. The next year Joseph Laidley, also of Richmond, became third vice-president. In 1857 James Cooke of Fredericksburg was elected first vice-president.[28] Members of the Association living in Virginia in 1858 were: R. H. Stabler, J. W. Bowling, and John A. Milburn of Alexandria; Joseph Laidley and T. Roberts Baker of Richmond; James Cooke and Fayette W. Johnson of Fredericksburg; and Frederick M. Wells of Charlotte Court House. Silas Whitehead of Lynchburg, a member in 1856, was dead in 1858. James B. Campbell of Portsmouth was listed as a "correspondent."

The Virginia Pharmaceutical Association was founded in 1882, largely due to the activities of the Petersburg Pharmaceutical Association. In May 1881 E. R. Beckwith, corresponding secretary of the Petersburg society, circularized the druggists of the state in regard to the propriety of forming a state-wide association. Favorable answers were received, and an organization meeting was called in Petersburg for January 4, 1882. The meeting was held in the Y. M. C. A. building. There were twenty-three representatives of the profession from Staunton, Richmond, Norfolk, Lynchburg, Petersburg, and Manchester. Officers elected were T. Roberts Baker of Richmond, president; C. A. Santos of Norfolk, William E. French of Petersburg, C. H. Lumsden of Lynchburg, George W. May of Staunton, vice-presidents; E. R. Beckwith of Petersburg, secretary; F. H. Masi of Norfolk, treasurer; and E. A. Craighill of Lynchburg, corresponding secretary. The first annual meeting was held in the Hall of the House of Delegates in Richmond, May 16, 1882. Thirty-eight representatives from various parts of the state participated in an epochal session. There was much sentiment in favor of a state pharmacy law, and a model bill was adopted for presentation to the next legislature. At the 1883 meeting of the association the proposed law was still a subject of vital interest. George J. Seabury of New York, an honorary member of the Virginia Association, made an eloquent plea in behalf of an intelligent pharmacy law, declaring that "Pharmacy laws are established for the purpose of legalizing intelligence, suppressing ignorance, and for the protection of the medical profession, the Pharmacist, the patient

[28] Proceedings of the American Pharmaceutical Association, 1858. Laidley, while engaged in the manufacture of percussion caps for the Confederate military service, was accidentally killed by an explosion of the material upon which he was working.

and the public. . . . We must hold ourselves in readiness to discover new remedies, and before submitting them to our co-laborers, the medical profession, we are expected to explain their physiological and therapeutic action, which enables history to repeat itself, by introducing vividly to the mind, the apparition of the departed Apothecary of the eighteenth century, who was the last link in the chain of slavery that connected the two professions." Referring to the medical practice acts by which the state protected the medical profession and to the friendly relations between the physician and the pharmacist, he declared that "the medical practitioner should be just as firm in insisting on the demand for strict Pharmacy laws as the druggist."[24]

On March 3, 1886 "An act to incorporate the Virginia Pharmaceutical Association, and to regulate the practice of Pharmacy, and to guard the sale of poisons in the State of Virginia" was passed.[25] It permitted only registered pharmacists and practising physicians to retail, compound, or dispense medicines or poisons, or to conduct a pharmacy. Merchants, however, were permitted to sell such common drugs as quinine, epsom salts, castor oil, calomel, and opium. In order to be registered a pharmacist had to be a graduate of a recognized college of pharmacy or to have served three years' apprenticeship in some drug store or be a licentiate of pharmacy of the Virginia Board of Pharmacy, which was created by the same act. The Board was to consist of five members, appointed by the Governor for a term of five years. In 1894 changes were made in the Virginia code, requiring of the applicant a four-year apprenticeship followed by examination before the Board of Pharmacy. Every drug store was required to have a registered pharmacist in charge.

The Virginia Pharmaceutical Association was greatly assisted in its success before the state legislature by the Medical Society of Virginia. At its 1886 meeting the Association was prompt to vote a resolution of thanks to "the Medical Society of Virginia, for their endorsation of the Pharmacy Bill . . . and to Dr. Harvey Black of the House, and Hon. Wm. Lovenstein of the Senate, for their persevering and successful efforts which resulted in the passage of the pharmacy law by the Legislature of Virginia on the 3d of March, 1886; and also, to Drs. Hunter McGuire, C. W. P. Brock, and Landon B. Edwards, for the effectual aid they rendered the Chairman of the Committee on Legislation, Mr. Edgar A. Taylor. . . ."[26]

[24] Proceedings of the Virginia Pharmaceutical Association, 1882, pp. 6, 7, 9, 13, 25; 1883, p. 66.
[25] Acts of Assembly, 1885-'86, p. 405. The bill provided that poisons should be labeled and the name of the purchaser given.
[26] Proceedings of the Virginia Pharmaceutical Association, 1886, p. 24.

Friendly relations between the medical and pharmaceutical associations were at once established, and both societies appointed committees to effect more cordial coöperation. In June 1889 the Medical Society of Virginia named Drs. L. B. Anderson of Norfolk, James Parrish of Portsmouth, and Jesse H. Peck of Hampton as their accredited representatives at the Norfolk meeting of the Virginia Pharmaceutical Association; while the pharmacists appointed Messrs. Blair and Santos to represent them at the Medical Society of Virginia meeting in Roanoke. The delegates were cordially received and accorded the privileges of the floor by the respective societies; but the doctors never appeared to find time to consider matters the pharmacists were anxious to have discussed, and after a few years pharmacist Polk Miller[27] offered a motion opposing the sending of future delegations to the Medical Society. With evident warmth he declared that "our drug stores are stocked with a variety of compounds about which neither the apothecary nor the doctor knows anything. . . ." The doctor's habit of "jumping at every new thing that comes along forces us to buy, and the demand is kept up until some newer thing comes along. The doctor prescribes the last one he sees, and leaves on our hands unsalable stock sold us by a former traveling agent. . . . We have had at every meeting of the Virginia Medical Society a regularly appointed delegate from our Association, for the purpose of conferring with the medical practitioners upon matters in which we are both interested. The doctors, on the contrary, have ignored our meetings and sent no delegates."[28] Mr. Miller's motion was not adopted, but the discussion it aroused showed that most of the pharmacists agreed with his condemnation of the doctors.

The Pharmaceutical Association continued to meet and to promote higher ethical standards in the profession. President Beckwith in 1891 declared: "We deprecate with the strongest emphasis anything that may discourage the highest attainment of theoretical and practical knowledge or that shall declare itself satisfied with a minimum amount of study in our profession. As an instance, we sound a danger warning. The fashion of the day runs to madness in the line of quack preparations. When these are of real merit, the formula is in the hands of any well-informed pharmacist, and it is within his province to compound from his stock, under the direction of a physician. This compounding changes theory to practice, and gives the pharmacist a readiness in the handling of his wares. A most pernicious custom, despised in its inception by the medical

[27] Polk Miller was for many years a celebrated figure in Virginia, known chiefly for his successful minstrel entertainments, which inimitably portrayed in folk song and story the Southern negro at his best.

[28] Proceedings of the Virginia Pharmaceutical Association, 1892, p. 21.

faculty, has grown popular of late. Through their recommendations, though unconsciously perhaps, our practicing physicians are the recognized advertisers of patent medicines, and the results are no more evident than hurtful. It is known to the profession that many of these patents, though differing in name, are made from very similar formulas. From the same bottles, under differing proportions, a pharmacist can compound a large number of these patents."[29]

How real was this complaint may be verified by an examination of the files of contemporary medical journals. The *Virginia Medical Monthly* recommended to its readers as "worth perusal" the advertisements of numerous patented and proprietary medicines and enthusiastically endorsed many others. The editor confessed personal experience with beef peptonoids and had strong convictions in favor of Valentine's Meat Juice. Advertisements of Budwell's emulsion of cod liver oil carried long testimonials from Drs. Hunter McGuire, W. C. Dabney, L. B. Edwards and Herbert Claiborne. It was said to have an "alterative affect of very great value." Celerina, Hydroleine, Tongaline, Wolf-Trap Water, Cosmoline, Fellows' Hypo-Phosphites, Kennedy's Pinus Canadensis, Colden's Liquid Beef Tonic, Avenna Sativa, and Listerine appear prominently in the *Monthly,* all carrying favorable editorial comment. The druggists themselves were not above patenting their favorite preparations. Many modern popular household remedies had their beginning in Nineteenth Century Virginia drug stores. Blair's Chloral Thymol was endorsed by some of Richmond's leading doctors. In 1892 it was declared to be an "active Germ Destroyer and thorough Deodorizer."[30]

The standards of pharmaceutical practice are largely in the hands of the Virginia Board of Pharmacy, whose duties are, not only to register qualified pharmacists under the law and examine those who have since its passage become sufficiently advanced by practical experience for examination, but also to see that the provisions of the law are carried out and to recommend such amendments as might further protect the public against ignorance and fraud. The first Board, established by the pharmacy act of 1886, consisted of T. Roberts Baker, president, E. R. Beckwith, secretary, Robert Brydon, Edgar Warfield, and K. W. Thomas, Jr. In its first annual report it pointed out that the law, while requiring the pharmacist to register, permitted the physician to conduct a pharmacy or drug store without such formality. In permitting a country merchant to dispense medicines without registering if a practising physician hap-

[29] Proceedings of the Virginia Pharmaceutical Association, 1891, pp. 7, 8.
[30] Virginia Medical Monthly, 1883, v. 10, p. 684; 1892, v. 19, adv.; 1894, v. 21, adv.

pened to have established an office in his store, the law was both unjust and dangerous.

Most of the pharmacists of the Nineteenth Century received their training in apprenticeships of from three to four years. A few were graduates of Northern schools. The first college to teach pharmacy in this country was in Philadelphia (1821). Schools were organized later in New York, Boston, and Maryland. The early schools were largely proprietary in nature, and in many sections of the country this handicap still obtains. Instruction in pharmacy was early a part of the medical curriculum at the University of Virginia. In 1827 Dr. Emmet was made professor of chemistry, materia medica, and pharmacy. In 1886 a separate course in pharmacy was introduced, Professors Mallet, Towles, Dunnington and J. R. Page giving the lectures. Pharmacy was taught as a part of the medical course in the Medical College of Virginia from its very beginning. The chair of chemistry and pharmacy, first held by Socrates Maupin (1838-1853), was successively occupied by Drs. Martin P. Scott, James B. McCaw, R. S. J. Peebles, and William H. Taylor. In the College catalogue of 1880 notice was given of courses in materia medica, therapeutics, chemistry and pharmacy. Together they were designated as the "School of Pharmacy" and led to a special diploma. In 1882 students who had had two years in some approved drug store were declared "graduates in Pharmacy" if they had successfully taken examinations in chemistry and materia medica.

In 1893 the University College of Medicine was organized in Richmond with a separate department of pharmacy. The first faculty in this department was T. Ashby Miller, Ph. G., dean and professor of the theory and practice of pharmacy; Charles H. Chalkley, M. D., professor of chemistry (succeeded by T. Wilbur Chelf); and Andrew T. Snellings, Ph. G., professor of botany and materia medica.

In 1897 the old school followed suit and divided itself into the three departments of medicine, dentistry, and pharmacy. The School of Pharmacy offered a two-year graded course. Frank M. Reade taught the theory and practice of pharmacy, Dr. J. M. Whitfield, chemistry; Dr. William H. Taylor, toxicology; Dr. Robert F. Williams, botany and materia medica, and Dr. F. H. Beadles, pharmacognosy. Between 1877 and 1899 twenty-one pharmacists were graduated from the Medical College of Virginia. Several of these graduates are yet alive. Of them two are proprietors of well-known drug stores in Richmond, one has retired and two are manufacturers of popular hair preparations.

Among the pharmacists of Virginia whom a succeeding generation will do well to honor was Hugh Blair (1824-1902), eldest son of Dr. James Blair.

At an early age he began work in the drug store which his father had left for the maintenance of his widow and children. Blair later took up the study of clinical pathology and as early as 1885 was engaged in the chemical and microscopical examination of urine. His services, for which he charged five dollars, were widely sought.

T. Roberts Baker (1825-1906), also of Richmond, was the son of Mary Marshall Roberts and Hilary Baker, treasurer of the Richmond, Fredericksburg and Potomac Railroad. He completed a good preliminary education and an apprenticeship in the drug store of DuVal & Company before beginning study at the Philadelphia College of Pharmacy in 1850. A contemporary wrote: "His thesis on Ergot has placed his name on that subject in every Dispensatory published since his graduation."[81] In 1856, with R. H. Meade, he formed the firm of Meade & Baker, which came to be recognized through Virginia and North Carolina as the makers of pure drugs, chemicals and physicians' supplies. Meade & Baker's tooth powder was long a favorite dentifrice. Baker's influence in raising standards of pharmacy was felt through his active work in the local and state associations and on the Board of Pharmacy, and extended to the national organization, of which he was vice-president in 1879.

Turner Ashby Miller (1862-1924) also made fine contributions to the cause of higher pharmaceutical education in Virginia, serving twenty years on the Virginia Board of Pharmacy, and directing the department of pharmacy in the University College of Medicine from its organization in 1893. He was president of the Board of Pharmacy from 1894 to 1898 and secretary from 1901 to 1915. He was president of the Virginia Pharmaceutical Association in 1905 and of the National Association of Boards of Pharmacy in 1915. Miller was born in Culpeper, Virginia, February 24, 1862. He graduated from the College of Pharmacy in Philadelphia about 1883, moved first to Danville and then to Richmond, where he opened a drug store which was in continuous operation until his death on May 16, 1924.[82]

Joseph N. Willis, after serving in the Civil War, entered the drug business in Richmond at Fourth and Franklin Streets. In 1882 he was placed in charge of the laboratory of the Owens & Minor Drug Company. Other Richmond druggists of by-gone days were Richard Hudnut, located at Twenty-fifth and Broad Streets; Benjamin McPhail, at Seventeenth and Main Streets; J. H. Childrey, at Eighteenth and Main; J. Hatley Norton, at Eighth and Main;

[81] Proceedings of the Virginia Pharmaceutical Association, 1907, pp. 31-32.
[82] Information furnished by Mrs. Miller and by A. L. I. Winne, secretary of the Virginia Pharmaceutical Association.
[83] Fleet's sodium phosphate is still sold widely in Virginia.

Robert Lecky, at Seventeenth and Broad; S. W. Farrar, at Twenty-fifth and Leigh.

Charles Brown Fleet (1843-1916), after studying at Columbian University and serving in the Civil War, settled in Lynchburg, first as a druggist and later as a manufacturing chemist.[83] For twenty-three years he was secretary of the Virginia Pharmaceutical Association as well as a member of the Board of Pharmacy of Virginia. He twice served on the committee on revision of the United States Pharmacopœia.[84]

III. NURSING

Until the middle of the Nineteenth Century nursing the world over was as it always had been, sometimes in the hands of relatives, sometimes carried on by the Sisters of Charity, but oftener left to slovenly old women without skill, kindness or good morals. In Virginia, before the advent of the trained nurse, colored women did most of the nursing. In the Norfolk epidemic of yellow fever in 1855 nursing was in the hands of volunteers of all kinds from both within and without the state. Women like Annie M. Andrews, medical students, free negro women as well as slaves, were employed.

In the hospitals of the period nursing was inadequate and untrained. Dr. William H. Taylor, a student at the Medical College of Virginia in 1855-56, described the hospital attached to the institution at that time as "cleanly, but not at all showy." "We had but one nurse," he writes, "a white man of hermit mien and solitary-looking visage, who attended the males, while the janitor's cook and washerwoman attended the females. The solitary-looking man was not very muscular and not very agile, and was never flurried nor hurried. When he came to announce to us residents a critical turn in the condition of a patient, he did it in such a leisurely and apathetic fashion that commonly we found that the patient had stopped breathing while the messenger was communicating his tidings."[85]

As late as the early eighties in one of Richmond's first private hospitals a convalescent patient was put "in the room with a patient who was confined to bed so that the more able of the two could wait on her less fortunate companion. There were five colored women who had practical experience in the care of the sick and the chief of these was Lena." At the end of a long operation she was often seen to "take a cold baked sweet potato from her pocket and

[84] Virginia Pharmacist, 1916-'17, v. 1, p. 3.
[85] Taylor: Old Days at the Old College, Old Dominion Journal of Medicine and Surgery, August 1913, p. 73.

eat it with one hand while she washed and passed marine sponges to the surgeon with the other."[86]

In the Danville Home for the Sick, opened May 1886, the matron, Mrs. F. B. Burnett, was assisted by an old negro woman and an equally old negro man, who had served her since the days of slavery. During the early days of the Sheltering Arms Hospital and the Home for Incurables in Richmond their staffs consisted of one white nurse, or matron, and one or two assistants, usually colored.

In 1893 the catalogue of the Medical College of Virginia advertised: "our hospital adjoining the College, under control of the Faculty, has been renovated, improved and equipped . . . will be conducted by the Sisters of Mercy. . . ." In the first infirmary opened by the College in 1838, Sisters of Charity had also formed the nursing staff.

Florence Nightingale began to turn out the "new style nurses" in 1860. It was 1873, however, before training schools were established in this country—first at Bellevue Hospital, New York, and later in New Haven, at the Massachusetts General Hospital, and at the Johns Hopkins. How this movement swept the country and fired the imagination of women everywhere until today 125,000 trained nurses serve the American public, is one of the proud chapters of American medicine. It was one of the most important movements of the Nineteenth Century, and Miss Nightingale, who must be included in any list of great Victorians, was the sole genius behind it. Her conception of a nurse—chaste, sober, honest, truthful, trustworthy, quiet, cheerful, cleanly, thinking only of her patient—became the ideal of the young profession, and each nurse strove to be

> "So kind, so duteous, diligent,
> So tender over his occasion, true,
> So feat. . . ."

In 1885 a writer in the *Virginia Medical Monthly* urged the establishment of a training school for nurses in the proposed State General Hospital: "Intelligent nursing has become one of the necessities of civilization. . . . The profession in the South has been slow to appreciate the importance of establishing a training school for the education of our own people to do this important work."[87] Shortly afterward another writer declared: ". . . the demand for graduates cannot be supplied by the thirty or more training schools now suc-

[86] McGuire, Stuart: Origin and Evolution of Saint Luke's, Bulletin of St. Luke's Hospital, 1929, p. 74.
[87] Virginia Medical Monthly, 1885-'86, v. 12, p. 579.

cessfully operated in the several large cities of the Union. . . . The old-timed nurse was regarded with suspicion and distrust by the medical attendant, lest she should by accident acquire a smattering of the practice of medicine and arrogate to herself the functions of the physician, thus playing the role of a nuisance rather than a help . . . there is a demand for more training schools, and particularly is there a want in the Southern States. . . ."[38]

The first training school for nurses in Virginia was established at St. Luke's Hospital in 1886, and with the exception of one in New Orleans and one in Charleston it was the only school of its kind in the South at that time. The original St. Luke's Training School was composed of five nurses. In 1888 the *Virginia Medical Monthly* reported that "Miss Walker, a clever and accomplished lady, presides over the nurses," who included "seven ladies and one or two male nurses."[39] The course of instruction included "lectures, demonstrations and recitations in anatomy, physiology, symptomatology, therapeutics and hygiene," with special attention to "instruction in the sanitary care of the sick and of the rooms and houses occupied by them; the details of antisepsis as it receives its highest exponent in perfect cleanliness of patients, attendants, instruments, etc.; the art of bandaging, the dressing of blisters, cupping, leeching, poulticing, enemas, use of catheter, alimentation, electricity, massage, etc." Nurses were taught "to make record of clinical cases as regards temperature, pulse, respiration, food, discharges, sleep, mental state, conditions of wounds, effects of medicines, etc., the doses and antidotes of the common drugs, the means of arresting the different forms of hemorrhage, the use of the speculum and a knowledge of other gynæcological and surgical instruments and appliances. . . ."[40]

The only training school for colored nurses in the state in this century was organized as the Hampton Training School for Nurses in 1891, and before 1900 there had been thirty-five graduates. Its avowed aim was to retain "in the hands of colored women a profession for which even without training the negro women have always shown themselves especially adapted."[41]

In 1893 two new training schools opened in Richmond, one at the Retreat for the Sick Hospital and one at the University College of Medicine Hospital. The College catalogue of 1895-6 advertised the "Virginia Hospital and Training School for Nurses." There were ten nurses on the staff at this time.

[38] Sanitary Monitor, 1885, v. 1, p. 99.
[39] Adolphus, still an orderly at St. Luke's, was at that time a boy in short pants, employed to open the front door and later to answer the telephone.
[40] Sanitary Monitor, 1886, v. 2, p. 48.
[41] Ninth Annual Report, Hampton Training School, p. 9.

In 1893, also, a training school was started in the Alexandria Hospital, and two nurses graduated in 1896.[42]

In 1895 a similar school, comprising a two-year course, was organized by the Medical College of Virginia at the Old Dominion Hospital in Richmond. An effort was made to put this school at once upon a plane of unusual efficiency and standing. The authorities turned to the Johns Hopkins Hospital, from which they drew their superintendent, Miss Sadie Heath Cabaniss, a recent graduate under Miss Hampton. Miss Cabaniss, a native of Petersburg, was a graduate of St. Timothy's School before beginning the study of nursing in the Johns Hopkins Hospital. She had hardly taken charge of the nursing school in Richmond before her strong personality was felt. Her education, training, ideals, and force of character contributed to the formation of a school of nursing whose high standards are still pointed to with pride and gratitude.[43]

Danville's first trained nurse was Miss Casteline, who was sent there about 1894 by Dr. Joseph Price of Philadelphia. Others were sent as they were needed. Up to that time the local nurses had received between five and six dollars a month. Dr. Price's nurses asked the unheard-of fee of twenty-five dollars a month. The expense of these imported nurses was said to have caused the establishment of the local training school.[44]

In November 1895, with three pupils in the first class, the Petersburg Training School for Nurses was organized by Miss J. N. Ions. From the beginning the school offered a two-year course, and to improve the type of training which nurses received arrangements were made with several Northern hospitals for postgraduate study. The credit for the high standards which the Petersburg School maintained is graciously given by Miss Ions to Miss Cabaniss of the Old Dominion Hospital, who during this period was exerting herself in behalf of the nursing profession of Virginia.[45]

In 1898 a training school for nurses was established at the Danville Home for the Sick. It was organized by Miss Lucy A. Sharpe, a graduate of Johns Hopkins Hospital.

Between 1896 and 1900 a training school was established in the King's Daughters Hospital at Portsmouth,[46] and in 1900 a similar school was organized in the Marshall Lodge Hospital at Lynchburg.

[42] Personal communication from Miss Fanny Carter, Superintendent of the Alexandria Hospital.
[43] After graduating five classes at the Old Dominion Hospital, Miss Cabaniss resigned to become director of the I. V. N. A. She gave up this work in 1909 to become the first rural public health nurse in Virginia. She served in the shipyards at Point Wentworth during the World War, and died in 1921.
[44] Personal communication from Dr. I. C. Harrison of Danville.
[45] Personal communication from Miss J. N. Ions of Petersburg.
[46] Personal communication from Joseph D. Collins of Portsmouth.

Before 1900 there were no training schools in Suffolk, Abingdon, Fredericksburg, Newport News, or Winchester, but trained nurses were probably imported in special instances into all these cities.

Many Virginia women entered the training schools of Northern hospitals both before and after the educational movement had started in Virginia. One of the earliest to return to Richmond was Miss Lilly Price. She was the first trained nurse in the city, and her employment soon became a measure of the seriousness of a sickness—"So and So's case is desperate indeed. They have sent for Miss Lilly Price." Before the turn of the century there were trained nurses in many Virginia cities.

A Graduate Nurses' Association was founded in Richmond in 1898, with Miss Frances B. Humphreys as president. A "Directory for Nurses" was established in connection with the association, to be kept at Sheltering Arms Hospital.[47]

In 1834, largely through the efforts of Rev. Timothy O'Brien, pastor of St. Peter's Church, Richmond, Sisters Margaret Cecilia George, Ann Catharine, and Mary Editha were sent to Richmond from the community of Sisters of Charity at Emmitsburg, Maryland, to found a girls' orphanage. This was the beginning of Catholic nursing in Virginia. Since that time various other orders of Sisters have been established within the diocese of Richmond[48]—the Benedictine Sisters, the Little Sisters of the Poor, the Sisters of Charity of Nazareth, Kentucky, the Franciscan Sisters, the Sisters of the Holy Cross, the Visitation Nuns, the Sisters of the Perpetual Adoration, the Sisters of the Blessed Sacrament, the Sisters of St. Dominic, and the Sisters of Mercy. Visiting and nursing the sick was once a prominent part of the duties of these sisters, but in recent years, with the development of modern nursing, the sisters have given less and less attention to the professional care of the sick.

Virginia owes a particular debt of gratitude to the Sisters of Charity who cared for the victims of yellow fever in Norfolk in the great epidemic of 1855 and who in 1856 founded there St. Vincent's Hospital, taking full charge of the nursing, which they have continued until the present time. Many of their order came from without the state during the Civil War to join those already at work here in caring for the sick and wounded. Their services were particularly prominent in Richmond, Norfolk, and Fortress Monroe where they were joined by the Sisters of Mercy. Several thousand aged and infirm men and women have been nursed and cared for by the Little Sisters of the Poor at St. Sophia's Home for the Aged in Richmond; and in the care of orphans at St.

[47] Virginia Medical Semi-Monthly, v. 3, p. 61.
[48] This diocese embraces nearly all of Virginia and part of West Virginia.

Joseph's Girls' Orphanage in Richmond, at St. Mary's Girls' Orphanage in Norfolk, and at St. Andrew's Boys' Orphanage in Roanoke, the Sisters of Charity have found other fields of usefulness.[49]

IV. VETERINARY MEDICINE

Until 1870 veterinary practice in the United States continued in the hands of sow gelders, horse doctors, and cow doctors, often the local blacksmiths—for the most part a group of empirics, without social or professional standing. By 1880 a few reputable veterinarians, mostly foreign-trained, began to write in the journals, and it was through their influence that veterinary teaching began in this country. Until very recently most students of the profession were compelled to study in private schools, such as those of Dr. Liautard in New York and Dr. Andrew Smith in Toronto. About 1879 the agricultural colleges began to create departments of veterinary medicine, and about the same time Cornell University conferred on Dr. D. E. Salmon the degree of D. V. M., believed to be the first of its kind conferred in this country. Dr. George C. Faville, with a thesis on hog cholera, received the second at Iowa State College in 1880. He became state veterinarian in Colorado the same year, joined the United States Bureau of Animal Industry in 1887, and in 1894 was sent to Norfolk as resident inspector. Here he at once became involved in the fight against the Texas cattle fever, at that time epidemic in the Southern states.

Veterinary practice was put upon a much higher plane by the organization of the Virginia Veterinary Medical Association, of which Dr. Faville was a founder, on February 6, 1894, and by the activities of such men as William H. Harbaugh, who became its first president. Twelve charter members were elected, March 22, 1894, and the association began immediate agitation for better laws. It condemned the practice of granting health certificates to dairy herds by unqualified inspectors, citing the example of an inspector who in the course of half an hour examined one hundred cows and pronounced them free from tuberculosis.

In 1896 it strengthened its ranks by electing to honorary membership interested individuals from the medical and dental professions. Moses D. Hoge, George Ben Johnston, and W. T. Henderson of Blacksburg accepted membership in the association. At the same time it sought and secured a bill governing the practice of veterinary medicine in Virginia. The act which was passed February 27, 1896 provided for a State Board of Veterinary Examiners consisting of five members nominated by the association and appointed by the gov-

[49]Personal communication from Rev. F. Joseph Magri, Diocesan Historian, St. Paul's Church, Portsmouth, Virginia.

ernor. The association also passed resolutions calling attention to the prevalence in Virginia of Texas fever (trypanosomiasis) and bovine tuberculosis,[50] and to the concerted effort of interested individuals to suppress the facts. It demanded laws to control the spread of contagious diseases among cattle.

Dr. Harbaugh's activities were not confined to Virginia. He became nationally recognized as a crusader for Federal action in a nation-wide program to stamp out bovine tuberculosis, and it was due largely to his influence that the Virginia association in 1896 urged upon Congress measures to control this prevalent disease.[51] He took the lead in advocating proper inspection of milk in Virginia. Several noteworthy contributions of his to the medical literature of the state brought before the medical profession a subject which they had been too prone to neglect. His articles dealt with the important relationship of the veterinarian to public health, with meat inspection, and with bovine tuberculosis and other diseases of animals bearing upon human diseases.[52] He died in 1898.

In this year W. T. Gilchrist became president. In 1900 the association was again heard from, advocating state and municipal laws to protect human beings from diseases common to animals. It also passed a resolution that "no milk inspection is competent that does not include the Tuberculin test, and no meat inspection is competent that does not take place before and at the time of slaughter," and urged that veterinarians be placed upon municipal and state boards of health.

In recent years the medical profession of Virginia has displayed a surprising lack of appreciation of the importance of veterinary medicine. The veterinarians are still without a single school in the state, and although there are about eighty graduates practising today in Virginia[53] most of them are past middle life, and alarmingly few students from Virginia are now interested in the profession. This may be explained in part by the automobile's displacing the horse, around which most of veterinary medicine formerly centered, but with the problem of bovine tuberculosis still with us, Bang's disease on the increase, and other contagious diseases of animals constantly threatening, the demand for well-trained veterinarians will continue.[54]

[50] A single herd of 134 cattle near Richmond, supposed to be healthy, showed 71% of tuberculosis.

[51] At the same time it expressed its opposition to the proposed anti-vivisection bill.

[52] Articles by Dr. Harbaugh in the Virginia Medical Monthly: Bovine Tuberculosis in Relation to Public Health, 1895, v. 22, p. 1204; Veterinarians on Boards of Health, 1890, v. 17, p. 537; Animal Diseases and the Public Health—Abattoirs and Meat Inspection, 1891, v. 18, p. 268; Abattoirs—Notes on System and Statistics, 1891, v. 18, p. 391.

[53] Ten are employed by the state, and ten by the Federal government.

[54] Faville, George C., B.Sc., D.V.M.: The Virginia State Veterinary Medical Association, 1931, gives a short history of the progress of veterinary medicine in this country, as well as an account of the Virginia Association, of which Dr. Faville was a founder and one of the presidents.

CHAPTER X

THE CULTS

MODERN medicine is intolerant of theories. It pays court to no school of thought or system of practice. Its basis is fact, demonstrated and accepted on the same ruthless principles that obtain in other fields of science. Unfortunately this has not always been the case. Only recently has legitimate medicine cleared its skirts of a great mass of confusing and cluttering theories, whose death knell was sounded in the epoch-making discoveries of the last quarter of the Nineteenth Century—the revelations of bacteriology and the application to medicine of the newer knowledge that has come in the realms of chemistry, physics, biology, and physiology.

The trained mind instantly rejects much that the ignorant readily accepts, and the amazing gullibility of the average person accounts for the popularity of many fantastic explanations of the phenomena of nature and disease. In such soil the cultists, faddists, and charlatans have flourished and will continue to flourish. But if history continues to repeat itself, the days of each cult are numbered. As phrenology, Mesmerism, and Thomsonianism came and went, so the homeopathic, osteopathic, and chiropractic schools will be succeeded by newer and more attractive cults of the future.

On the whole the conservatism of Virginia has not offered much to encourage the cults, while the laws of the state, at least since 1884, have made it difficult for irregular medicine to flourish here.[1] The Virginia code which deals with this subject was drawn by the medical profession, and while it was designed to protect the public against exploitation and fraud, at the same time it dealt liberally and equally with graduates of all cultist colleges. It provided that, "No applicant shall be rejected upon his examination on account of his adherence to any particular school of medicine or system of practice, nor on account of his views as to the method of treatment and cure of diseases."[2] At present, except in materia medica, therapeutics, and practice of medicine, the same examination is given to all applicants.

A complete examination of the rise and fall of the many irregular methods of practice that obtained in Virginia during the last century would lead us far

[1] Medical Practice Act, passed January 31, 1884.
[2] Amendment to Act of 1884, passed March 1, 1888.

afield.[8] The more important of them have, however, distinct medical interest. Without any sharp line of demarcation we can trace in Virginia in the early Nineteenth Century the same types of itinerant practitioners—some of them honest, some as piratical as their London ancestors—that were to be found here in the Eighteenth Century.

One Dr. Lozarus opened a dispensary in Richmond in 1806, where he sold antibilious stomach cordials, liniments and other medicinal preparations. Claiming to cure all manner of diseases, in association with a certain Dr. S. H. P. Lee of Connecticut, he advertised himself and his patent medicines in the *Virginia Impartial Observer.*

A specimen of the traveling specialist was Dr. Turnbull, "oculist and aurist" from London, who in 1856 paid a brief professional visit to Richmond, freely advertised his presence, and won laudatory editorial comment. The Richmond *Examiner* quoted the London *Times* and the St. Louis *Democrat* in support of his claims to cure both deafness and blindness. While in town Dr. Turnbull kindly offered to medical men "a course of instruction on the diseases of the Eye and Ear." This sort of irregular practice troubled Virginia but little compared to the organized cults which in pursuit of practice at any price conducted the most active propaganda through the press and by paid agents.

One of the most remarkable of these cults was "botanic medicine." It was founded on the theory that in a country such as America there must of necessity grow medicinal plants suitable for every disease of the inhabitants. Its followers traced their origin to Indian medicine men and to the colonial practice of making use of native medicinal plants. They were violently denunciatory of regular practitioners, whom they called "mineralists" and charged with the sins of bloodletting, blistering, and purging. In general there were two schools of botanic physicians, the eclectics and the Thomsonians, flourishing chiefly in the South and West. Both possessed fondness and facility for high-sounding titles, which they continually changed in favor of better ones.

Wooster Beach, native of Connecticut, one of the founders of eclecticism, began his career as an empiric in 1825, published the *American Practice of Medicine* in 1833, and established what was known as the "Reformed Medical Society of the United States" in 1829. Samuel Thomson, a New Hampshire blacksmith, stating "that all diseases are the effect of one general cause and can be removed by one general remedy," went about the country establishing "friendly

[8] The numerical importance of the various cults in 1881 may be estimated from the fact that there were in the United States in that year 89 regular colleges, 13 homeopathic, 11 eclectic, 1 physio-medical and 2 miscellaneous; with 10,157 regular matriculates, 1,162 homeopathic, 946 eclectic and 60 physio-medical. Virginia Medical Monthly, 1885, v. 12, p. 753.

botanic societies" and in 1822 published a book known as *The New Guide to Health.* His "system," which became generally known as Thomsonianism, was patented and sold for $20 to anyone who wished to practise on his own family and for $100 to those who wished to practise on their neighbors. The botanic physicians were not at all in agreement and after first splitting into several subdivisions were united about 1848 as the American Eclectic Medical Association. The next year they changed their name to the National Eclectic Medical Association, and they still survive as one of our many cults.[4]

On August 2, 1836 the "Richmond Virginia Thomsonian Infirmary" on F Street, opposite Trinity Church, advertised in the Richmond *Enquirer* that proprietary rights had been transferred from Ward, Sears and Company to Dr. George K. Hooper, its "superintendent and practitioner," who offered Thomsonian medicine and books for sale and asked the continued patronage of his friends. The *Enquirer* on June 19, 1838 carried the advertisement of Moses P. Hazelton who was about to establish in Richmond a Thomsonian Infirmary in a "spacious mansion" at Eleventh and B Streets. Dr. Benjamin M. Thomson, formerly of Concord, New Hampshire and lately of the Petersburg Thomsonian Infirmary, was to be in charge. There were to be special apartments for ladies, with female attendants, and accommodations for negroes. Vapor baths and Thomsonian medicines were to be featured. In 1844 Dr. E. D. Robinson, a graduate in medicine of the University of Ohio, was advertising the "Thomsonian Botanic Practice" at his office on H Street, Shockoe Hill. As a further inducement he added: "Diseased servants purchased, and a liberal price given for such as are considered incurable."[5] In 1846 his office was on Broad Street between Brook Avenue and Foushee Street. In 1850, listing almost every known disease as curable by his system, he again advertised that he had been "successfully engaged in the Botanic Practice of Medicine for nearly fifteen years, is still relieving and positively curing . . . eight out of ten of those who apply to him, and who have been pronounced incurable. . . ."[6] He had moved his office to Franklin Street, between Thirteenth and Fourteenth. Two years later he informed the public that, "Though we do not expect Medicine to cure disease in all constitutions . . . yet our experience . . . has fully confirmed us in the belief that . . . our practice very far surpasses every other. While we have lost, in the last fifteen years, no case which we have reason to believe any other treatment would have saved, we have cured very many . . . on which the skill

[4] Packard: History of Medicine in the United States, p. 1227.
[5] Richmond Whig, January 16, 1844.
[6] Richmond Directory, 1850.

of the popular system has been exhausted in vain."[7] He was still practising in 1855, but died the following year.

Ellerson's *Business Directory and Almanac* for the year 1846 shows that Richmond, a city of 20,000 inhabitants and forty regular physicians, could boast of another botanic practitioner besides Robinson: W. W. Marshall had an office on East Main Street between Fourteenth and Twentieth Streets in that year. At the same time, Peyton Johnson, druggist, was advertising "Thomsonian Medicines" including "Nerve Powder, Lobelia, Golden Seal, Bayberry, No. 6, Cholera Syrup, and all other herbs and medicines used in the practice. . . ."[8] The next year he was pleased to advise the public of a supply of imported leeches.

In 1847 a committee of the Medical Society of Virginia, after a careful survey of the state, discovered that in seventy-four of 119 counties there were 972 physicians. Of these, 249 held no diplomas. Thirty-one of the latter were out-and-out Thomsonians. One was a homeopath.[9] From this it can readily be estimated that there were between forty and fifty Thomsonian practitioners in the state at that time.

A contemporary opinion of Thomsonianism may be found in an article published in 1851 by Dr. John F. Peebles of Petersburg. Says he: "How coarse and crude appears this torturing practice of medicine, when compared with the refined idealisms of homeopathy and mesmerism; even before the less elegant system of hydropathy, it sinks into insignificance—it has no prototype in the old world. It embodies a spirit which has no existence there, that of our restless, dauntless, active, western backwoodsmen, who even judge of their 'physic' by the amount of labor it is capable of performing. . . .

"The manner of its circulation was like that of a patented machine. Agents, armed with set phrases against the use of mineral poisons, and in favor of vegetable remedies peddled the books through the country, and sold the right to their use in practice at twenty dollars per right. It steadily spread on, until it pervaded the whole country, including the Canadas. Every neighborhood was invaded, and in every neighborhood one or more individuals were to be met with, possessed of the requisite turn of mind necessary to constitute a Thompsonian [sic] doctor. . . .

"These are the men who decry the faculty, who shudder at mineral remedies, and who see health alone in the vegetable kingdom. One such was asked in

[7] Richmond Directory, 1852.
[8] Richmond Enquirer, November 13, 1846.
[9] Transactions of the American Medical Association, 1847, v. 1.

our presence of what was calomel made? Of copper and brass, was his confident reply, doubtlessly deriving the opinion from a fancied analogy between that 'awful' poison and the venemous look of the rust of these metals."[10]

The eclectics must have felt that they had a good foothold in Virginia, for in 1846 they set about founding a school in Petersburg.[11] The Richmond *Enquirer* advertised the Eclectic Medical School of Petersburg, conducted by Drs. H. M. Price and C. J. Kenworthy:

"The subscribers will deliver a course of lectures in Petersburg, Virginia, upon the Thomsonian or Eclectic Practice of Medicine, commencing on the first Monday in November next, and closing on the last Saturday in March following.

"The course will embrace Anatomy, Physiology, Pathology, Surgery, Theory and Practice of Medicine, Obstetrics and Diseases of Women and Children, Therapeutics, Materia Medica, Chemistry, Pharmacy, Medical Botany and Forensic Medicine.

"Cost of the entire course only $50. Four lectures daily.

"The course will be acknowledged by one of the best 'reformed medical institutions' in our country. Cadavers are plentiful, and especial attention will be paid to Anatomy and Surgery.

"Surgical operations, of all kinds, will be performed during the Course gratuitously, by Dr. Kenwertly."[12]

A Boston editor, noting the formation of the Petersburg school, was quick to state, "Our impression is, that it is a Thomsonian machine for the manufacture of a very low order of medicine mongers."[13]

At the same time there was established on Bank Street, in Petersburg, a "Botanico Medical Infirmary" in charge of these same busy directors, Drs. C. J. Kenworthy and H. M. Price, who announced that they were "prepared to treat all persons afflicted with chronic, and supposed incurable forms of disease. Persons from a distance can be accommodated with Board at $4 per week. Medical charges moderate."[14] Dr. Kenworthy also conducted a "Botanic Medicine Store," which advertised repeatedly that "Dr. Price's Ague and Fever Pills are warranted to cure Ague and Fever in from twenty to thirty hours. . . ."[15]

[10] Stethoscope and Virginia Medical Gazette, 1851, v. 1, pp. 16, 20.
[11] The school was incorporated March 8, 1847, with the title "Scientific and Eclectic Medical Institute." Acts of the General Assembly of Virginia, 1846-'47, p. 154.
[12] Richmond Enquirer, May 8, 1846. "Kenwertly" is a misprint for "Kenworthy." Apparently directors and faculty overlapped, for Kenworthy and Price were listed in the act of incorporation among the fifteen directors of the Institute.
[13] Boston Medical and Surgical Journal, 1847, v. 36, p. 486.
[14] Richmond Enquirer, July 14, 1846, and succeeding issues through November.
[15] Richmond Enquirer, July 14, 1846 and succeeding issues, continuing into 1847, with slight changes in the name of the store.

In Richmond, also, an eclectic practitioner, John Tomlin Walsh, M. D., "Professor of Anatomy and Physiology in the Eclectic Medical College of Pennsylvania," was advertising in 1850 that he had located in the city and "respectfully offered his professional service to the Public. Particular attention paid to the Diseases of Women and Children. . . . Office and Residence over the Dry Goods Store of M. & L. Rose, 203 Broad Street."[16] Two years later the Directory lists: "Dr. John T. Walsh, Broad, bet. 6th and 7th"; but he was gone in 1855.

Perkinsism—a short-lived fad introduced by Elisha Perkins (1740-1799) of Connecticut—was based upon the theory that the galvanic current could be applied effectively in the treatment of all disease. Perkins's apparatus consisted of metallic or magnetic tractors, which he patented in 1798. They presented the appearance of a large compass with one sharp and one round point and were constructed of various combinations of metals. The tractor was applied with a stroking motion which produced an effect analogous to the galvanic current or even to animal magnetism. When it was shown that tractors constructed of wood were equally effective it at once became patent that the virtue of these contrivances was purely imaginary, and they went quickly into the discard. That Virginia did not escape this particular fad is shown by Mordecai's account of Perkinsism, in *Richmond in By-Gone Days*.

As the century wore on, more and more use was found for electricity. It was generally felt that it exerted great influence on the course of many diseases, and various types of apparatus began to find their way into private homes as well as into the offices of physicians. "Medical Galvanism" was frequently referred to in the daily papers. The Richmond *Enquirer* during 1846 and 1847 carried many advertisements of "Dr. Christie's Galvanic Rings, Bands, Belts, Bracelets and Magnetic Fluid." Several decades later the advertisements for a single issue of the *Virginia Medical Monthly* included Dr. Kidder's Electro-Medical Apparatus, the McIntosh Galvanic Belt and Battery, Bryan's Electric Belt, and the products of the Galvano-Faradic Manufacturing Company. These, as well as other electrical appliances which flooded the market, led to widespread clinical trial, and many articles in the current medical literature indicate the uses to which they were put. Some of the subjects considered in Virginia medical journals were the galvanic current in lesions of the brain, the tonic effect of electrotherapeutics, electrolytic treatment, electricity in post partum hemorrhage, and the general application of electrolysis to disease.

[16] Richmond Directory, 1850.

Animal magnetism was popularized by Franz Mesmer in the latter years of the Eighteenth Century. His hypnotic seances, which he conducted dressed in a lilac suit and carrying a harmonica and a wand, were popular in Paris in 1778. The subject was exploited by his followers, attracting more and more public attention in Europe and in this country. In November 1845 the first number of the *Magnetist* was published in Richmond, "devoted to the investigation of the physiology of man and the diffusion of useful knowledge." It was the organ of certain citizens who were ardent believers in animal magnetism and mesmerism. About the same time a Frenchman styling himself "Professor De Bonneville" appeared in Richmond, advertising his accomplishments in animal magnetism and clairvoyance. He pretended to transform "pocket handkerchiefs into snakes and water into castor oil," and boasted of the uncanny faculty of reading with his eyes bandaged. The *Magnetist,* speaking for Professor De Bonneville, explained that "there is an elastic invisible ether pervading all nature, and that a modification of this ether pervades the nervous system, which, being set in motion by the will, can be made to combine with the nervo-magnetic principle of another individual and thus operate upon his brain so as to paralyze and to hold him subject to the will of the magnetizer." Although citizens attended the professor's lectures in droves, some of them could not stomach all of his deceptions. The *Whig* was particularly vicious in its attacks upon him, and Augustus L. Warner, dean of the Richmond Medical School, declared that believers in the traveling fakir were "a parcel of damned fools." In fact, it was alleged that Warner was the instigator and ring leader of a mob that ultimately fell upon Professor De Bonneville and chased him out of town. The city, however, was not through with mesmerism. Successors to the French professor continued to visit it from time to time, usually drawing large audiences. A professor at the Medical College of Virginia declared that, "Students of medicine here have submitted to take lessons from them in hypnotic learning, and paid them for the privilege of their instruction, and physicians themselves have condescended to coöperate with them in public shows, which, assuming that they possess a profoundly psychological significance, yet have the misfortune to look marvellously like third-rate mountebank kick-ups."[17] The same writer informs us that in the medical curriculum, "no notice is given to it [hypnotism], except in a brief and general way, in the lectures on medical jurisprudence."[18] An editorial writer in 1851 asserted that, "Legerdemain, under the disguise of the words animal magnetism, is the vilest quackery of all.

[17] Taylor: De Quibus, pp. 113-115.
[18] Taylor: De Quibus, p. 116.

. . . As journalists we treat of facts and reasonings in science and literature; all without the range of these we consider quackery, and mesmerism pre-eminently so."[19] At a later period, it is stated, hypnotism was actually performed before the students by members of the medical faculty.

Franz Gall of Vienna and John G. Spurzheim were responsible for another Nineteenth Century craze which enjoyed widespread popularity in America after 1832. Phrenology or cranioscopy, as the science of cerebral localization came to be known in Gall's hands, was carried to extremes. No less than thirty-seven cerebral areas, corresponding to markings on the skull, were described and charted. Absurd deductions were drawn as to what bosses, depressions, and ridges indicated in regard to character, likes, dislikes, and other manifestations of human personality. In the hands of even more unscrupulous followers phrenology became the object of ridicule by men of science everywhere. The influence of this movement in America is reflected in the foundation of the Boston Phrenological Society about 1832 and its operation for ten years. In Virginia the number of articles in the medical journals dealing with various phases of cerebral localization indicate the same influence at work. The *Southern Literary Messenger* reprinted from the *New Yorker* in 1839 seven lectures by George Combe of Edinburgh on phrenology. In introducing the series the editor remarked, "We feel fully persuaded that we cannot offer anything more acceptable to the readers of the Messenger."[20]

Homeopathy began in Germany and by 1825 was widely accepted in America. Its founder, Samuel Christian Frederick Hahnemann, like his prototype Paracelsus, based his system upon the doctrine of signature — *similia similibus curantur*—and infinitesimal dosage. His pronouncements came at a time when the regular medical profession was subject to widespread criticism and ridicule because of its polypharmacy and massive dosage; and, although in his own country Hahnemann attracted chiefly neurasthenic women, his disciples in America succeeded in winning not only many of the public but some of the medical profession itself. The great majority of the regular medical profession was violently antagonistic, however much they may have been benefited by the emphasis on small dosage. Dr. W. W. Parker of Richmond contributed several denunciatory articles to current medical periodicals. His *Rise and Decline of Homeopathy,*[21] praised by an editorial in the *Journal of the American Medical Association,* attempted to demonstrate its absurdities and brought forth evidence to show that, like other fads, it was already declining in popularity. In

[19] Stethoscope and Virginia Medical Gazette, 1851, v. 1, pp. 171, 172.
[20] Southern Literary Messenger, 1839, v. 5, p. 394.
[21] Transactions of the Medical Society of Virginia, 1890, p. 155.

1896 he read before the American Medical Association a paper entitled *Was Hahnemann Insane?* The *Virginia Medical Monthly* in 1893, speaking editorially of the absurdities and inconsistencies of homeopathy, thought it "strange yet true that many people like to be humbugged."[22] The *Stethoscope* in 1851 rejoiced at the expulsion of homeopathic members of the Edinburgh College of Physicians and was pleased to note that the authorities had begun "to see the necessity of purging their body of the Hahnemannic *entozoa* which defile their *primæ viæ*."[23]

Homeopathy was never a flourishing profession in Virginia. In 1847 there was one follower of the school in the state. Possibly this early practitioner was A. H. Atwood, who had settled in Richmond by 1852 "with the design of . . . diffusing the important benefits of Homeopathy." Professing ability to treat all diseases, he claimed that his practice was "founded on truth and facts, and not on systems and hypothesis." His office was in the Floyd House on the corner of Main and Eleventh Streets.[24]

By 1886, although there were then said to be fewer than fifteen practitioners in the state,[25] the organization was sufficiently strong to secure a modification of the medical practice act to provide for the appointment by the governor of "five homeopathic physicians who may be nominated to him by the Hahnemann Medical Society of the Old Dominion, in the manner hereinafter provided," to serve on the State Board of Medical Examiners.[26] The law of 1894 reduced homeopathic representation to two. It is now limited to one. There were three homeopaths in Richmond in 1894, six in 1897, and the same number in 1900.[27] In 1895 the Homeopathic Clinical Club met monthly in Richmond, under the presidency of George L. Stone, M. D. In 1898 the club had become the Richmond Homeopathic Medical Society, with E. C. Williams, president, and H. S. Corey, secretary. At the same time the Homeopathic Free Dispensary, at 611 West Main Street, was in operation, fostered by a board of socially prominent lady directors. The physicians attached to the dispensary were George L. Stone, George A. Taber, E. C. Williams, George F. Bagby, A. L. Marcy, and H. S. Corey.[28]

Homeopathy in the South lost much of its purity. Those who departed from the strict tenets of the sect defended their position upon the ground that

[22] Virginia Medical Monthly, 1893, v. 20, p. 214.
[23] Stethoscope and Virginia Medical Gazette, 1851, v. 1, p. 417.
[24] Richmond Directory, 1852.
[25] Virginia Medical Monthly, 1885-'86, v. 12, p. 709.
[26] Acts of Assembly, 1885-'86, p. 542.
[27] Richmond City Directories.
[28] Richmond City Directories, 1897, 1898, 1900.

Southern diseases demanded more vigorous doses than Northern diseases. A Southern homeopathic writer in 1891 declared in criticism of his fellows that they were striving after "scientific flesh pots and the pathological will-o'-the-wisp . . . the germ theory and its microbe craze."[79]

Osteopathy was founded by Virginia-born Andrew T. Still (1828-1917). At nineteen years of age Still moved with his family to Missouri. Ten years later he was elected to the Kansas legislature and was active in the slavery fight. Later he became interested in finding other means than medicine to combat disease, and in 1874 he formulated his principles of osteopathy. In 1892 the American School of Osteopathy was founded at Kirksville, Missouri. Still's system of health and healing was built around the theory that "the living body is a vital machine which will . . . protect itself against disease so long as it is in correct mechanical adjustment. . . . Structural derangement is considered the most important underlying disease cause."[80] In therapy, reliance is placed on specific manipulative removal of the "lesion." Although osteopathy has gained some headway in Virginia in recent years and is now represented by one member upon the state examining board, there is very little evidence of its having existed in this state before 1900.

Christian Science, that "scientific system of divine healing" set forth in 1875 by Mary Baker Eddy in her *Science and Health,* teaches that "the only reality of sin, sickness or death is the awful fact that unrealities seem real to human, erring belief, until God strips off their disguise."

Christian Science had little appeal for Virginians of the Nineteenth Century. In 1890 there were no representatives of the organization in this state, although there were at that time more than eight thousand members outside the state.[81] In 1900 there were probably no more than a hundred members in Virginia, while in the cities of Richmond, Norfolk, and Lynchburg there were five "practitioners" devoting their entire time to the healing of the sick as taught in Christian Science. As late as 1906 there were only two Christian Science organizations in the state: one in Richmond with a membership of eighty-nine, and one in Norfolk with a membership of eighty-six.[82] By 1928, however, the influence of this cult was strong enough to write into the Virginia Code permission for the "practice of the religious tenets of any church in the ministration

[79] The Medical Advance, Chicago, 1891, p. 454. There have been no homeopathic applicants to the Virginia Board in the last ten years.
[80] Encyclopædia Britannica, 14th Edition.
[81] United States Census, 1890.
[82] United States Census, 1906. Information from the Christian Science Board of Directors, Boston, 1933.

to the sick or suffering by mental or spiritual means without the use of any drug or material remedy, whether gratuitously or for compensation, provided sanitary laws are complied with. . . ."[88]

Chiropractic treatment as employed in the United States is "based on the assumption that most disease results from displacement of the vertebrae and pressure upon the nerves as they emerge. . . ." It was not encountered in Virginia in the Nineteenth Century for the very good reason that the theory was not developed in detail until 1903, when B. J. Palmer worked out his system of so-called articular adjustment with the hands. He later established at Davenport, Iowa, the Palmer School of Chiropractic. After a little over two decades 25,000 practitioners were scattered throughout the United States.

[88] The Medical Practice Act of Virginia, as amended 1928, Virginia Medical Monthly, 1928, v. 55, p. 57.

CHAPTER XI

HOSPITALS

THERE are thirty-three hospitals operating in Virginia today which were founded before 1900. All except eight of them were organized after the Civil War. There were undoubtedly others, which met the needs of their day and closed their doors for one reason or another, leaving behind them no record of their good works. Virginia hospitals in the Nineteenth Century were of three orders—government institutions for the army and navy; state institutions for the care of the insane, drug addicts, epileptics, and the deaf and the blind; and private institutions, organized in most cases for charity by groups of women sensible of the growing needs of local communities, and in a few cases by physicians for their private patients. The widespread popularity of the hospital movement in Virginia was one of the distinguishing characteristics of the late years of the century. In this respect Virginia but reflected a national movement, for although there were only fourteen hospitals in the United States in 1800 by 1900 the number had increased to 1,511.

I. FEDERAL HOSPITALS

The Station Hospital, United States Army, at Fortress Monroe was established in 1818. Its activities were greatly accelerated during the Civil War and again in the Spanish-American War, when the hospital ship *Solace* landed forty-four wounded at one time. It is now a general hospital of ninety beds. There were other Federal hospitals in that vicinity during the Civil War: the Hygeia Hotel was filled with sick and wounded; the Chesapeake Female Seminary was converted into the Chesapeake Hospital; and at Portsmouth the Marine Hospital, established in 1798, and the Balfour Hospital, consisting of two hotels, a factory, two churches, three public halls, and twenty hospital tents, were similarly employed.[1]

The Norfolk Naval Hospital, whose long and interesting history has been recorded by Captain Richmond C. Holcomb, dates from 1830. Located at old Fort Nelson, across the river from Norfolk, it was designed to be the most elaborate and expensive hospital ever constructed in Virginia, and almost a million dollars has been expended upon it at various times, making its building,

[1] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, p. 898.

of stone with a massive white portico of Doric columns, impressive even today. Its twenty-odd surgeons in charge up to 1900, beginning with Thomas Williamson and W. P. C. Barton,[3] have been officers of the United States navy.

It was used as a yellow fever hospital for the town of Portsmouth during the great epidemic of 1855. Lewis Willis Minor (1808-1872), who succeeded Williamson as surgeon at the Hospital in 1855 is buried in the cemetery there, and his tombstone is inscribed: "He served as Fleet Surgeon in The Navies of the United and Confederate States: Was skilled in his profession: Distinguished for gallantry in Mexico and conspicuous for his noble devotion in the Great Epidemic of 1855 for which he was thanked by the Sec'y of the Navy & voted a gold medal by the corporation of Portsmouth."[5]

The hospital has played a prominent part in four wars. At the beginning of the Civil War it was taken over by the Confederate States and held for one year, with Surgeon George Blacknell, who had held this position twenty years before under the United States navy, in charge. During this period the grounds were a busy Confederate camping ground, and many Confederate dead are buried in the cemetery. The hospital's original maximum capacity was 204 beds, but before the Civil War the average number of patients was between twenty and thirty. In 1864 there were 195 sick in the wards. After the war, due to the natural shrinkage in the navy, there were rarely more than forty patients in the hospital, and some parts had to be closed. It again became the scene of activity in the Spanish-American War, when ninety beds were added and the Daughters of the Revolution and the Sisters of St. Vincent de Paul served as volunteer nurses. Its services were greatly expanded during the World War and since then have continued. It is now a hospital of 733 beds, with 46 nurses and an active hospital corps school. Its cemetery is an interesting spot, where tombstones bear testimony in many tongues to the dead of other nations who are buried there.

The Marine Hospital at Ferry Point, the first marine hospital in this country, was used by the government until the Civil War, after which it was abandoned and sold.[6]

[3] Barton later became the first surgeon-general of the navy. Williamson, who was in charge of the hospital at various times between 1830 and 1855, was decorated by the French government for his services to the French steamer *Chimiere* at Norfolk, during the yellow fever epidemic in 1855.

[4] Holcomb: A Century with Norfolk Naval Hospital, 1830-1930, p. 437.

[5] A full account of this hospital has been given in Blanton: Medicine in Virginia in the Eighteenth Century, pp. 288, 291.

[6] Fort Whipple was renamed Fort Meyer in honor of Brigadier General Albert J. Meyer, a retired army surgeon.

[7] Personal communication from Lieut. Col. A. T. Cooper, M.C.

The present Station Hospital of the United States Army at Fort Meyer was established in 1874 as the post hospital of Fort Whipple.[6] Its activities have always been confined to caring for the sick and wounded personnel of the station. Contract Surgeon Lewis W. Ritchie, assisted by five enlisted men of the hospital corps and one hospital matron, constituted the original personnel. The bed capacity, at that time twelve, has been increased to fifty. It has never been used as a training school for nurses.[6]

The Southern branch of the National Home for Disabled Volunteer Soldiers was established by act of Congress in 1870. Property at Hampton formerly occupied by the Chesapeake Female College was purchased, and the home was opened in 1871. Here disabled veterans have been cared for ever since—130 in 1871; 3,408 in 1899. During this time eight surgeons have been in charge.[7] An epidemic of yellow fever broke out here in 1899. This home is still in operation with a bed capacity of 2,349.[8]

II. STATE HOSPITALS

The Eastern State Hospital for the Insane, located at Williamsburg, was opened for the reception of patients October 12, 1773 and is the oldest institution of its kind in America.[9] It began with a small two-story structure and in spite of several disastrous fires gradually increased in size until it now has nine large buildings with modern equipment. The total number of patients in 1831 was fifty-eight. By 1900 they had increased to 563. This hospital is particularly proud of being the first institution in the country to care for the colored insane. It was the first, also, to get away from "the mischievous idea that a lunatic asylum is an object of unmitigated horror and disgust in which clanking chains, straight jackets, distorted features and frantic violence are the most prominent objects."[10] Three generations of the Galt family—John Minson Galt, Alexander D. Galt and John Minson Galt II—controlled the hospital as superintendents and physicians from 1795 to 1862. After this it was successively in charge of P. Wager, Leonard Henley, R. M. Garrett, A. E. Peticolas, D. R. Brower, Harvey Black, Richard A. Wise, James D. Moncure, and L. S. Foster.[11]

The crowded condition of this institution and the difficulty of transporting patients to it from the western part of the state led to the passage in 1825 of

[7] The surgeons have been W. M. Wright, Clark McDermont, A. J. Hare, G. H. Marmon, S. K. Towle, W. W. L. Phillips, Edward L. Welling and R. S. Vickery.
[8] Personal communication from the Director of National Homes, C. W. Wadsworth.
[9] The early history of this institution may be found in Blanton: Medicine in Virginia in the Eighteenth Century, p. 291.
[10] Hurd: Institutional Care of the Insane in the United States and Canada, v. 3, p. 721.
[11] 131st Report of the Eastern State Hospital of Virginia, 1904, p. 77.

"an act to authorize the establishment of a Western Lunatic Hospital." Land was purchased at Staunton, and the new asylum, later called the Western State Hospital, was opened on July 25, 1828. It boasted a main building, "a large and convenient meat house, together with a stable, 30 feet square, both of brick," and temporary wooden structures for the accommodation of patients. Dr. William Boys was appointed visiting physician.[12] The institution grew rapidly and by 1847 was caring for 207 victims of mental disease. In that year an epidemic of typhoid fever affected thirty patients. Fortunately there were only two deaths. In 1848 the hospital was ministering to 400 patients, in 1889 to 667. The wanton destruction of the stores and provisions of the hospital by Federal soldiers under Sheridan in 1863 was a serious blow to the institution and endangered the lives of many helpless individuals.

Many innovations in the treatment of the insane were instituted here. Patients sat down in comfortable chairs in a central dining hall to attractively served meals, and outdoor and indoor work was provided, as well as amusements of various sorts. The author of this reasonable plan was Staunton-born Francis T. Stribling (1810-1874) who in 1836 took charge of the asylum and for the rest of his life held this responsible position. As early as 1839 he was busily instituting such recreational features as the "library, the stereoscope, billiards, chess, drafts, ten pins, cards," etc. In this he was years in advance of his time. "His system of moral treatment . . . was a distinct advance on everything in use at that time, and he was one who could minister to a mind diseased, not by drugging it into stupor, but by developing the better instincts by occupation and rational amusements. . . . The improvements in lighting, heating and sanitation that he caused to be adopted put and kept the Western Lunatic Asylum among the best institutions of the day."[13]

The physicians in charge, who after 1840 were called superintendents, were: William Boys (1828-1836), Francis T. Stribling (1836-1874), Robert F. Baldwin (1875-1880), Archibald M. Fauntleroy (1880-1882; 1884-1886), Robert S. Hamilton (1882-1884), D. B. Conrad (1886-1889), Benjamin Blackford (1889-1906).[14]

The Northwestern Lunatic Asylum, established by an act of the Assembly in 1858, was opened for patients October 22, 1859 at Weston, now in West Virginia. It was the result of another effort to relieve the overcrowding in the existing institutions of the state. With R. Hills as superintendent and N. B. Barnes as assistant the institution functioned under the state of Virginia for the

[12] 77th Report of the Western State Hospital of Virginia, 1904, p. 11.
[13] Hurd: Institutional Care of the Insane in the United States and Canada, v. 3, p. 728.
[14] Hurd: Institutional Care of the Insane in the United States and Canada, v. 3, p. 732.

few years intervening before the Civil War and then passed into the hands of the authorities of the newly created state of West Virginia. A raid on the hospital by Confederate soldiers, who destroyed one ward and deprived all the patients of their blankets, was as inexcusable as Sheridan's vandalism at the Staunton asylum in 1863.[15]

Virginia was the first state to provide for the institutional care of insane negroes. Free negroes were admitted to the Williamsburg asylum as early as 1773 and slaves after 1846. In 1850 a separate building for negro patients was erected there. Although Dr. Stribling repeatedly urged upon the legislature (as early as 1845) the need for a separate institution for the treatment of negroes, it was 1870 before this important step was taken.[16]

The Central State Hospital for insane negroes, now established at Petersburg, was first located just outside the city of Richmond on the Mechanicsville Turnpike. On November 1, 1868 the property on which stood the Howard's Grove Hospital, formerly a Confederate hospital, was leased to the Freedman's Bureau for "the care and treatment of sick and homeless negroes," some of whom were insane, feeble minded, and epileptic. The first physician in charge was a colored doctor by the name of Harris. Daniel R. Brower, U. S. army surgeon, succeeded him and remained superintendent until January 21, 1869, when he was transferred to the asylum at Williamsburg. His ability was so evident that he retained his position there for eight years, in spite of the fact that he was a Northern man appointed during the Reconstruction. Brower left Virginia to go to Chicago, where as professor of mental and nervous diseases in Rush Medical College he immediately became an important medical figure. He was the author of many monographs and of a textbook on insanity.

In December 1869 the hospital at Howard's Grove, by order of the military governor of Virginia, was "turned over to the State of Virginia for the purpose of establishing a temporary lunatic asylum" for negroes,[17] and the colored insane from the other institutions were transferred there. In spite of the hospital's primitive wooden buildings, Dr. Stribling, who visited it in 1869, found it, "clean, well ventilated, patients well cared for."[18] The General Assembly of 1870-1871 appropriated four thousand dollars to enlarge the buildings, which were considered "insufficient to provide for the reception and care of many lunatics who are now living in the county jails of the state." Starting with

[15] Hurd: Institutional Care of the Insane in the United States and Canada, v. 3, p. 809.
[16] Hurd: Institutional Care of the Insane in the United States and Canada, v. 3, pp. 724, 733, 734.
[17] Hurd: Institutional Care of the Insane in the United States and Canada, v. 3, p. 737.
[18] Internes in the hospital at this time were John N. Upshur of Richmond, Lewis E. Harvie of Danville, and J. S. Pendleton of Louisa County. Dr. J. J. DeLameter was the chief medical officer.

123 insane patients in 1870 the hospital grew and cared for more and more patients, under the superintendency of J. J. DeLameter, Daniel B. Conrad, and Randolph Barksdale. Dr. Barksdale, who took office in 1873, urged the construction of a permanent asylum, and the legislature appointed commissioners to investigate a site in 1876. In 1882 a site near Petersburg was accepted, and the asylum's directors were authorized to contract for the erection of suitable buildings. In 1885, at a cost of about $200,000, the new asylum was opened at Petersburg, and 373 patients were removed there from Howard's Grove. Some of the leading men of the state served on the board of directors of the Central Asylum during these early years. Dr. Hunter McGuire was the first president, in 1870; later presidents were Dr. J. G. Cabell and Dr. C. W. P. Brock. During the Readjuster period Dr. Barksdale was succeeded as superintendent by F. T. Brooke and David F. May, but was reinstated in 1884 and served with distinction until his death in 1896. Dr. William F. Drewry succeeded him.[19] In 1891 the Central Asylum received eighty-three patients from the Pinel Hospital in Richmond. Renewed appropriations from the state made possible the hospital's expansion, until at the close of 1899 it was caring for 852 patients and was well on the road to becoming the largest institution in the state.

On August 2, 1876 the Pinel Hospital, "a new hospital designed especially for the treatment of inebriates and mental diseases," opened in Richmond. It was located on the old fair grounds in "Mrs. Mackenzie's three story brick house," a site corresponding to the present intersection of Allen Avenue and Broad Street. Dr. James D. Moncure was the medical superintendent, and the board of directors included from among the medical profession Drs. J. B. McCaw, J. S. Wellford, Isaiah White, C. W. P. Brock and Francis D. Cunningham. Fifty beds were available for the treatment of addicts to opium and alcohol. The General Assembly passed a law in 1876 which authorized relations and friends "to have commissions held over these unfortunate citizens, and to compel them to be sent to the Pinel Hospital."[20] The hospital was subject to inspection by state officials, and patients were admitted to it upon the same terms as to the public asylums of the state. It was provided, however, that no inebriate or opium eater should be compelled to remain in the hospital longer than twelve months without his written consent.[21] The next year the capacity of the hospital was increased to one hundred beds. It was stated that there had been

[19] Hurd: Institutional Care of the Insane in the United States and Canada, v. 3, pp. 740, 748, 770.
[20] Virginia Medical Monthly, 1876-'77, v. 3, pp. 303, 465.
[21] Virginia Medical Monthly, 1876-'77, v. 3, p. 729.

thirty patients cured, nine operated upon and nine deaths.[22] In 1889 it was caring for sixty-four colored insane patients and two years later for eighty-three. The institution went out of existence in 1891, and its colored insane were transferred to Petersburg.

The Southwestern Lunatic Asylum was the last institution of its kind to be established in Virginia. A commission to select a site was appointed in 1884. When the legislature two years later was induced to appropriate $35,000 for the construction and furnishing of the new hospital, not only were the institutions in the state crowded to overflowing but jails and almshouses were filled with insane. The Southwestern Asylum was opened for the recepton of patients May 17, 1887 in Marion, a healthful village in the mountains. Harvey Black, formerly in charge of the Eastern State Hospital, was its first superintendent but died after a short tenure of office. He was succeeded by Robert J. Preston (1841-1906), a native of Washington County and a graduate of Emory and Henry College and the University of Virginia.[23] Dr. Preston remained in office until his death in 1906, writing extensively on medical subjects and enjoying a wide reputation as an alienist. He had been a captain in the Confederate army and became president of several medical societies, including the Medical Society of Virginia (1894) and the American Medico-Psychological Association (1902).[24]

The Virginia School for the Deaf and Blind in Staunton had its inception in a movement organized "to provide a suitable institution for instructing, on scientific principles, the deaf and dumb youth of Virginia."[25] In 1826 William W. Reid sought from the Mayor of Richmond the superintendency of "an asylum for the Deaf and Dumb when established in Virginia." In 1833 "Citizens in and around Staunton" subscribed "a considerable sum of money," seeking the location of the institution there.[26] In 1838 an act to establish "the Virginia asylum for the education of the deaf and dumb and of the blind"[27] was passed, and $20,000 was appropriated for a building and site, with an annual allowance of $10,000 for support and maintenance. Dr. Lewis W. Chamberlayne of Richmond and Dr. Francis Stribling of the Western State Hospital were active in this undertaking. By 1852 an additional $50,000 had been appropriated toward the construction of the institution and the annual appropriation had increased to $20,000. In 1875 it became the duty of clerks of school boards to take a census every three years of the deaf-mute and blind persons

[22] Virginia Medical Monthly, 1877-'78, v. 4, p. 762.
[23] Hurd: Institutional Care of the Insane in the United States and Canada, v. 3, pp. 772-775.
[24] Kelly and Burrage: Dictionary of American Medical Biography, p. 991.
[25] Acts of Assembly, 1832-'33, p. 136.
[26] Calendar of Virginia State Papers, v. 10, p. 543.
[27] Acts of Assembly, 1837-'38, p. 31.

between the ages of five and twenty-one residing in their districts. These reports were forwarded through the superintendent of schools to the institute at Staunton.[28]

In 1878 the education of the blind at the institute was segregated from that of the deaf-mutes, and each group now has its own classroom, faculty, course of study, and methods of instruction. Forty teachers are employed in the instruction and vocational training of white children, who are eligible for the institution if they are of school age, of sound mind, and afflicted with serious auditory or visual defects. The present enrollment is three hundred, of whom ninety are blind. About 2,700 children have been cared for by the institution since its founding, the majority of them deaf. The present plant consists of nine large brick and stone buildings located on ninety-eight acres at the eastern terminus of Main Street.[29]

In March 1861 the General Assembly passed "An Act incorporating the Southern Institution for the amelioration of the condition of the Deaf, Dumb, and Blind negroes of the commonwealth." William M. Langhorne and others were named in the charter, which contemplated the purchase of property not exceeding fifty thousand dollars. The Civil War must have put an end to this project, for nothing more is heard of it.

III. CHARITY HOSPITALS

The Richmond "Poor and Work House" at the north end of Second Street is first mentioned about 1809.[30] In 1835 there was a "New Burying Ground" in front of it, and to the east were the "Jews' Cemetery," the "Grave Yard for Free People of Colour," and a burying ground for slaves. The building provided hospital facilities at that time, for an advertisement of the projected Richmond Medical School stated that "clinical lectures will be given at the Almshouse."[31] The first mention of the City Hospital occurs in the first catalogue of the medical department of Hampden-Sidney, which opened in 1838 and listed as part of its clinical facilities, in addition to its own infirmary, "the City Hospital" and the almshouse. An 1848 map shows the City Hospital as located on Fourth Street facing Shockoe Cemetery.[32] It is described in the City

[28] Acts of Assembly, 1874-'75, p. 175.
[29] Personal communication from Superintendent H. M. McManaway, Staunton, Virginia.
[30] Young's Map, about 1809-'10, shows it in approximately its present location. The poor house, the city home, the almshouse, the city hospital are terms still loosely applied to this old institution. But for this knowledge the variation in terminology in the records would be very confusing.
[31] Richmond Enquirer, October 9, 1835.
[32] Charles Morgan's Map, 1848.

Directory for 1850 as "a large building erected and used for the purposes of a Hospital . . . a short distance from the poor house." Albert Snead, author of an article on *Cases of Small Pox treated at the City Hospital*,[33] was physician to the institution in 1854. It probably continued in operation until the Civil War. In 1857 A. E. Peticolas advertised that his private students might see surgical operations at the almshouse. At the outbreak of the Civil War the almshouse was turned over to the Confederate government and became its first hospital. After the war it again became an almshouse, and one hundred beds were available for clinical instruction in 1868.[34] In 1870 the old City Hospital building on Fourth Street was being used as a colored almshouse,[35] and the College announced that four hundred beds were now available for clinical teaching at the two almshouses. W. F. Mercer and Lewis Bosher were appointed physicians to the almshouse in 1883 and John G. Trevillian was surgeon in 1886. The Medical College had the privilege of appointing two or three of the resident physicians annually. In 1894 the University College of Medicine announced that "Richmond has had for a number of years a large charity hospital attached to the City Almshouse at which the College has had the privilege of appointing one resident physician and of giving bedside instruction including obstetrics."

The old almshouse was probably much like the present one—crowded with indigent sufferers from chronic diseases, and offering little in the way of equipment, nursing, or the opportunity for satisfactory clinical study. In 1890 the need for an adequate city hospital was voiced by the *Virginia Medical Journal*, which complained that except for "a ward or so in the poor house and appropriation of $300 for the College Dispensary" the city of Richmond made no provision for the medical care of its poor.[36] The superintendents of the almshouse since 1852 have been Albert Michaels (1852-55), John Pearce (1856-66), Charles P. Bigger (1866-67, 1870-86), John Pearce (1867-70) R. W. Carter (1886-96), George B. Davis (1896-1908). None were physicians.

Another antebellum hospital in Richmond was the Main Street Hospital, for slaves, on Twenty-sixth Street between Main and Cary. It is listed in the Richmond Directory for 1860, though little else is known of it.

An infirmary was established in the remodeled Union Hotel at Nineteenth and Main Streets when the Medical Department of Hampden-Sidney College was organized in Richmond, and formed an important part of the clinical in-

[33] Virginia Medical and Surgical Journal, 1854, v. 3, p. 35.
[34] Catalogue, Medical College of Virginia, 1868-'69.
[35] Caracristi's Map, 1873. shows the old hospital being used for this purpose.
[36] Virginia Medical Monthly, 1890-'91, v. 17, p. 331.

struction offered by the College. An advertisement of the "College Infirmary" in September 1838 announced a capacity of two hundred beds and made a feature of the fact that Sisters of Charity would act as nurses. To offset any objections to the Sisters, testimonials were printed from Robley Dunglison and other well-known physicians, expressing approval of having the nursing done by this Catholic order.[87]

When the College moved to Shockoe Hill in 1845, the Infirmary became an integral part of the new Egyptian building. The fees were small: $5 a week for white patients and $4 a week for colored, with nursing, medicine, and board included. One hundred and seventy-seven patients were admitted during the year 1855, when the total fees aggregated $5,046.79. Private rooms were first advertised in 1857 at rates ranging from $7 to $15 a week. In that year 257 patients were admitted. About the same time the hospital was under contract with the United States government and served as a marine hospital for the port of Richmond.

In the spring of 1861 the College moved its infirmary into a new building near at hand at 1225 Marshall Street, an expansion made possible by an appropriation of $30,000 from the General Assembly. Provision was made for lying-in women, and the hospital contained seventy-five beds, which were kept filled during the ensuing years of the Civil War. Over a thousand officers and soldiers and 239 other patients were admitted in 1861. Prices had risen so that negro ward patients were now required to pay $15 a week, white patients $20. This hospital was closed from 1864 to 1867 for financial reasons developing out of the war. When the hospital reopened, a City Dispensary was established in the Egyptian building, due to the combined efforts of the city authorities and the Freedman's Bureau. In 1869 a dispensary for eye and ear diseases was established in connection with the College hospital, under the direction of Francis Deane Cunningham, and the catalogue boasted that the infirmary might "not improperly be styled a City Hospital."

In 1874 the infirmary took the name of the Church Institute, the management passed from the College to a board of ladies representing the different religious denominations, and beds were "sold to Churches or charitable Associations at reduced prices," by the month or by the year. Patients were in charge of the professors of the College as before, and the hospital was said to afford "every advantage of the best of private hospitals for ladies and gentlemen who may be taken sick while visiting the city, as also for those who may come to consult or be treated by any regular physician." Friends of the institution bore

[87] Richmond Enquirer, September 18, 1838.

"cheerful testimony to the extreme cleanliness, perfect ventillation and admirable arrangement."[38] With Mrs. R. A. Payne as matron and Dr. James D. Moncure as superintendent, the Institute continued until August 1876. At this time Dr. Moncure resigned to take charge of the Pinel Hospital, and the Institute abruptly closed.[39]

In this emergency Hunter McGuire appealed to a friend, Mrs. Annabelle Gibson Jenkins, sister of the Reverend Churchill Gibson of Petersburg. A new hospital was organized with Mrs. Jenkins as superintendent, assisted by a board of lady managers representing the various religious denominations of the city. It was called the Retreat for the Sick, and it opened its doors March 14, 1877. For a while everything went well. Dr. McGuire was the dominant physician, his practice alone being declared sufficient to maintain the hospital. The disturbances in the College which resulted in McGuire's leaving the faculty in 1881 were reflected in the affairs of the hospital. In 1882 the faculty asked the lady managers to vacate their building, and Drs. Cullen and McCaw attempted to have the City Council use it as a city hospital. Although a new board of trustees shortly revoked this action, in 1883 the Retreat moved to new quarters and for ten years there was no hospital connected with the College. Surgeons operated at the new Retreat, at St. Luke's Hospital, just organized, and in private homes. Clinical teaching, thus handicapped, made the most of the dispensary, which now took up its quarters in the old Retreat building and in 1889 cared for as many as 15,000 patients.

In 1893 the building was rehabilitated and again opened by the College as "Our hospital," to be conducted by the Sisters of Mercy under faculty control. In 1895 it became an active competitor of the recently organized Virginia Hospital, voicing its rivalry in a new name, the Old Dominion Hospital. A new dispensary building was erected in 1897 on the space between the Egyptian building and the Hospital, and two years later a maternity annex was opened close by on Broad Street. From this time on until 1903, when it gave way to the Memorial Hospital, the Old Dominion's history was an enviable one. Miss Cabaniss was superintendent and Drs. George Ben Johnston and John W. Long were chief surgeons. In 1920 St. Philip's Hospital was erected upon its very foundations.

When the Retreat for the Sick moved from East Marshall Street in 1883 it took quarters a short distance away on Twelfth near Marshall, and here it continued to operate until November 30, 1920, when it moved into its present

[38] Virginia Medical Monthly, 1874-'75, v. 1, pp. 256, 257.
[39] Richmond City Directories, 1874-'75, 1877-'78.

quarters at 2621 Grove Avenue. Dr. John R. Wheat was for many years medical superintendent at the Retreat, and Drs. J. S. Wellford and F. D. Cunningham were closely associated with its early history. Unfortunately the Retreat's rupture with the College was followed by another with Dr. McGuire. Early in 1883 he withdrew from the staff, and by the time the building on Twelfth Street was ready he had opened his own private hospital. "Who else can draw patronage from abroad for such an institution?" asked the *Virginia Medical Monthly* when it heard of his resignation. But the Retreat survived this blow, and has had a long, useful history.

Care of the sick of Richmond by the Catholic Orders was first undertaken in 1834. On February 26, 1866 the St. Francis Infirmary was incorporated. A year later its charter was changed and Annie Roche, Margaret Noyland, Alice Rooney, Josephine Barry, and Laura Heath were made directors of the Infirmary, now called St. Francis de Sales, located on Brook Avenue, and instituted "to care for sick and disabled persons."[40] St. Sophia's Home for the Aged, 16 North Harvie Street, was established in 1874. For a number of years George Ben Johnston was attending surgeon. Although there is still an attending physician and "forty hospital beds" it has never been a hospital in the modern sense.

The Richmond Eye, Ear, and Throat Infirmary and Dispensary was incorporated October 13, 1879, with a distinguished board of trustees composed of Colonel Archer Anderson, Colonel A. S. Buford, General Joseph E. Johnston, Major Lewis Ginter, Joseph Bryan, John P. Branch, and others. It was organized to give gratuitous medical attention to the poor of the city and state and was located for most of its existence at 217 Governor Street. The leading spirit in the enterprise was Joseph A. White, who for years was senior surgeon. Dr. John G. Skelton was chairman of the board for many years. The early members of the staff were Philip Taylor, Charles M. Shields, and A. C. Palmer, with Drs. Coleman, McCaw, and George Ben Johnston as consultants. The Infirmary took indoor as well as outdoor cases. In 1887 it was said to be the "largest special Hospital in the South," with accommodations for twenty-five patients.[41] The medical report for 1893 showed that since its foundation 16,707 cases had been treated and 3,016 operations performed, more than 2,000 of them upon the eye. Although the Infirmary had no connection with the medical colleges, many of the students attended Dr. White's clinics and many physicians who afterwards specialized in this field were trained under him here. The city of Richmond appropriated annually $500 and the state of Virginia $1,000, but the

[40] Acts of the Assembly, 1866-'67. It was in operation in 1863, probably earlier.
[41] Virginia Medical Monthly, 1883-'84, v. 10; 1887-'88, v. 14, editorials and advertisements.

institution was never adequately financed and in 1924 closed its doors for lack of funds.[42]

Lee Camp Soldier's Home Hospital, with fifty beds, was established in Richmond in 1884 at the Boulevard and Grove Avenue. Since that time it has continued to take care of the sick among the Confederate veterans.

The Sheltering Arms Hospital was founded by Miss Rebekah Dulaney Peterkin as a nonsectarian institution for needy white people of Virginia. Mrs. John G. Wayt was its first president. It opened February 13, 1889 in the old Clifton house on Fourteenth Street between Franklin and Ross, was incorporated in 1891, and moved to its present location at 1008 East Clay Street in the fall of 1893.[43] From a small beginning of six beds, with one nurse and two assistants, it has gradually expanded its usefulness. In the early days Hunter McGuire, Moses D. Hoge, Christopher Tompkins, James B. McCaw, Raymond Garcin, and Hugh Taylor were among those who contributed their services.[44]

In the first announcement of the College of Physicians and Surgeons in 1893, the Richmond City Hospital was described as a part of the proposed new institution. The hospital never functioned under this name, for the College shortly changed its own name to the University College of Medicine and established at Eleventh and Clay Streets the Virginia Hospital,[45] described as a "charitable institution with sixty-two beds." A dispensary in the rear of the College building, under the direction of James N. Ellis, took care of ambulant cases. In 1896 the John Pope Annex increased the Hospital capacity to 125 beds, making it the largest in the city. The staff consisted entirely of professors in the school. The first resident physicians were John Lawrence and Richard T. Davis, Jr. The medical staff consisted of Thomas J. Moore, Landon B. Edwards, William S. Gordon, and Charles H. Chalkley; the surgical staff of Hunter H. McGuire, Hugh M. Taylor, Stuart McGuire, and J. Allison Hodges. Obstetrics was under Drs. George Ross and John F. Winn; diseases of the rectum, under Jacob Michaux; diseases of the skin, W. T. Oppenhimer; genito-urinary diseases, Lewis Wheat; diseases of the nervous system, J. Allison Hodges; diseases of children, Paulus A. Irving; diseases of women, Edward McGuire; and dis-

[42] Information from Dr. Joseph A. White.

[43] Virginia Medical Monthly, v. 20, p. 659. This house was built between 1854 and 1856 by William H. Grant, a wealthy tobacconist. In 1871 it was sold to Courtney M. Jones and later to Mrs. Potts, who rented it as apartments until it was bought for the hospital. (Deed Books, Richmond Chancery Court, No. 67b, p. 58; No. 94b, p. 62.)

[44] Information from Mrs. George T. King, one of the founders.

[45] The house was built about 1813 by Dr. John Brockenbrough, who sold it in 1816 and built the house which later became the White House of the Confederacy. The property passed through a number of hands before being bought by John Caskie in 1835. From the Caskies it passed to Lewis D. Crenshaw about 1870. John A. Lancaster bought it in 1882. The Lancaster family sold it to the College.

eases of the eye, ear, and throat, Joseph A. White and John Dunn. With the amalgamation of the medical schools in 1913 the Virginia Hospital was closed and its patients were transferred to the Memorial Hospital.

Last of the charity hospitals to be organized in Richmond during the Nineteenth Century was the Virginia Home for Incurables, incorporated March 1, 1894. Miss Mary Greenhow, herself an invalid, was chiefly responsible for its organization and became its first president. Other officers chosen in April 1894 were Mrs. Peyton Carrington, Mrs. J. B. Pace, Mrs. William H. Tatum, Mrs. F. J. Craigie, and Mrs. B. G. Maury. Objections from neighboring property owners made acquisition of a home difficult, and the institution was prevented by injunction from renting a house at 614 North Seventh Street. Finally a house at 1315 Ross Street was secured, and the formal opening took place December 18, 1894. There were five patients in the Home in February 1895, and the personnel consisted of Mrs. Glover, the matron, assisted by a cook and a male and a female nurse. In 1896 Drs. J. M. Winfree and C. W. Massie agreed to visit the home on alternate days, and Dr. Russell Pemberton became the regular physician in 1898.[46] A commodious brick building at Robinson and Broad Streets was opened on November 23, 1898.

The Hospital of Saint Vincent de Paul at Church and Wood Streets is the oldest hospital in Norfolk. The first building occupied had been the home of Dr. James H. Behan and his sister, who fell a victim to the yellow fever epidemic of 1855 and willed her property to the Sisters of St. Vincent de Paul to be used as a hospital. The house was destroyed by fire in 1899. The next year the present hospital, with a capacity of 228 beds, was constructed. It has been the policy of the hospital to keep its doors open to all classes and kinds of people, and by its free service to the poor it has made a large contribution to charity.

The Norfolk Protestant Hospital, originally known as the Retreat for the Sick, now located at Raleigh and College Avenues, was established in 1888. It has at the present time 175 beds.

There was no hospital in the city of Portsmouth until 1896, when the death of a stranger who had been taken suddenly ill and conveyed to the city jail for want of a better place aroused public interest to the point of organizing a local hospital. An old dwelling on Court Street was first pressed into service. It was a small, inadequate, two-story building, so overcrowded from the first that it was often necesssary to operate in a room already occupied by patients. Here Gray G. Holladay did the major surgery and inspired others by his enthusiasm

[46] Minutes of the Board of Directors.

and unselfish devotion. Drs. George W. Maupin, Jr., R. H. Parker, Frank S. Hope, Vernon Culpeper, Charles Culpeper, Charles T. Parish and R. L. McMurran supported the undertaking. It was, however, due chiefly to the King's Daughters Society that the venture prospered. In 1902 a larger house was purchased and equipped in a more modern way. In 1913 the present adequate hospital was built, known as the King's Daughters Hospital.

The act of incorporation of the Hampton Training School for Nurses, which was established in 1891 to train colored women in the nursing profession, provided also for "a hospital for the sick and afflicted." Supported by contributions from friends in the North and by donations from local individuals and organizations, the Dixie Hospital has grown and prospered, devoting itself to "work for the poor of the neighborhood, besides furnishing practice for the students of the school." It cared for 940 medical, surgical, and obstetrical patients in the first nine years of its existence and in 1900 contained twenty-one beds. In this year Dr. J. T. Boutelle was dean of the faculty, Dr. Frances Weidner, superintendent, and Drs. J. W. Hope, Albert Howe, J. H. Peek, Plecker, Addison and Vanderslice gave their support to the institution.[47]

There were no hospitals in Suffolk before 1900. Lakeview Hospital was not organized until 1906. Newport News was without a hospital until 1902, when the Newport News General Hospital was built.

During the Civil War Alexandria was one of the chief Federal hospital centers. Three divisions of the general hospital of the Federal army were located there. Seminaries, churches, warehouses, as well as dwellings, were used for the sick. The old Hallowell house on Washington Street, the new Hallowell house, the Tabb House,[48] the Fairfax Street hospital, the King Street hospital, the Fowle and Johnson houses on Prince Street, the Methodist Church on Washington Street, and the Grosvenor house were all Federal hospitals. Nearby, the Fairfax Theological Seminary was first a brigade hospital for Kearney's Division and later a general hospital.[49]

The present Alexandria Hospital was founded in 1872. Miss Julia Johns, daughter of Bishop Johns, organized the movement in the home of Dr. Francis Murphy. The staff consisted of Drs. M. M. Lewis, R. C. Powell, and William Gibson. In 1881 it moved into a small house on Duke Street, at one time a slave pen. In 1884 two buildings on Wolf Street, known as the Widow's Home and the Orphanage, were occupied. By suitable additions to these buildings

[47] 9th Annual Report of the Hampton Training School for Nurses, and Dixie Hospital. The hospital now has sixty-five beds.
[48] Bell Haven Institute.
[49] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, p. 897.

the hospital was enlarged to thirty-five beds. In 1917 the present building was erected.[50]

The Mary Washington Hospital in Fredericksburg was opened for patients October 1, 1899, two years after a group of women, with the encouragement of Major W. S. White, had organized the movement. Local support as well as contributions from friends outside the state made possible the erection of a modest little frame structure, which in 1907 consisted of four private rooms, two wards of three beds each, and an operating room. The institution was first in charge of Miss Virginia Aldridge, who as housekeeper, matron, nurse, and cook was the whole organization. The training school for nurses was not instituted until 1906.[51]

Petersburg had been a hospital center during the Civil War, but not until August 1886 was the Petersburg Hospital, first called the Petersburg Home for the Sick, organized. In that year, with a group of fifteen church women acting as managers and ten men as directors, the institution got off to a good start. Mrs. David Callender headed the undertaking and opened the hospital at 430 South Sycamore Street. The first staff consisted of Drs. Frank Haines, Samuel Budd, Robert McIlwaine, and H. G. Leigh, Jr. Mrs. Creighton was matron. There were sixteen beds, one a double wooden bed. Kerosene lamps served for light, open grates heated the rooms, and some patients brought their own feather mattresses. In 1891 the hospital moved to the Bragg house on Washington Street, its present location. Here in 1895 a training school under Miss J. N. Ions was started, and in 1896 the addition of an emergency ward added ten more beds, while a colored ward of nine beds still further enlarged its capacity. Other additions in succeeding years have greatly changed the old hospital. The original building is now occupied by the nurses' home.[52] The visits of Dr. Joseph Price of Philadelphia were for years important events. He came down once a year to perform operations, which the staff had arranged for him with the understanding that if one patient paid his regular fee, he would operate on any number of others without charge.[53]

The Marshall Lodge Home and Retreat in Lynchburg was established on January 5, 1886 by Marshall Lodge, No. 39, A. F. and A. M. First located at 1403 Church Street, it later moved to 1503 Grace Street, where it now stands.

[50] Personal communication from Miss Fanny Carter of Alexandria.
[51] Annual Report of the Mary Washington Hospital, 1897-1907. Personal communication from Miss Anna F. Lockhart, Superintendent. The present hospital of eighty-five beds was built in 1927.
[52] The hospital now has seventy-five beds.
[53] Richmond Virginian, June 2, 1812. Personal communication from Miss J. N. Ions, of Petersburg.

In recent years (1921) the name was changed to the Marshall Lodge Memorial Hospital. In 1889 the following physicians signed the hospital report: Drs. W. O. Owen, G. W. Thornhill, D. E. Bass, J. W. Dillard, W. T. Walker, Frank Camm, A. I. Clark, E. F. Snead, R. O. Owen, William H. Baker, D. A. Langhorne, R. K. Taylor, H. Grey Latham, Thomas L. Walker, A. W. Terrell, W. H. Dulaney, George M. Preston, W. E. Pitman, W. B. Thornhill, C. E. Busey. It now has seventy beds.

The present Lynchburg General Hospital, 215 Hollins Street, had its origin in the almshouse. Prior to 1897 medical services to the city's poor devolved upon two physicians. In that year an operating room was equipped in the almshouse, other hospital furnishings were installed, and one of the doctors was given the title of Physician to the City Hospital. A new building in 1912 and an addition in 1932 brought the hospital beds up to 143.[54]

The Danville Home for the Sick owed its inception to the Ladies' Benevolent Society of that city, headed by Mrs. Berryman Green. It was opened for patients in May 1886, in a small building for the upkeep of which the City Council appropriated two hundred dollars a year. The Home was without trained nurses until 1894, the sick being entrusted to the matron, Mrs. S. F. Burnett, assisted only by an old negro man and woman. In 1888 the Home was moved into a large building on Jefferson Street, formerly used as a girl's school. The physicians who played a prominent part in this movement were Drs. Lewis E. Harvie and W. L. Robinson. Other physicians to whom the success of the institution was due were William Nelson, W. C. Day, Sumpter George, James Green, R. V. Barksdale, F. S. Whaley, J. S. Irvin, S. E. Hughes, R. B. James, C. W. Pritchett, Franklin George, and Paulus A. Irving, who later moved to Richmond. In 1901 the name of the institution was changed to the Danville General Hospital, and in 1926 it became the Memorial Hospital.[55]

The hospital movement in Roanoke also was initiated by women. The King's Daughters in 1888 fitted up a building at 526 Nelson Street, Southeast. It was a small affair of six beds, modestly called the Home for the Sick. Mrs. S. W. Jamison headed the Board of Managers. Dr. R. G. Simmons and Joseph Imhoff were active in their support, the latter making with his "own hands a great deal of the equipment such as splints, bandages, sand-bags, and extension stirrups." The Home proving inadequate, the King's Daughters launched a campaign for funds for a larger hospital. The new building was about one-

[54] Personal communications from Drs. Earnest G. Scott and Mosby G. Perrow of Lynchburg.
[55] An address by the President of the Ladies' Benevolent Association, 1906, through the courtesy of Dr. I. C. Harrison of Danville.

third completed when the financial panic of the nineties brought construction to a standstill. It was completed in 1900 and as the Roanoke Hospital has continued to render valuable service ever since.

The King's Daughters Hospital of Staunton, now a general hospital of sixty-three beds, at 226 East Frederick Street, was established in 1892.

The Winchester Memorial Hospital was established in 1903. This was the first attempt in that city to provide hospital care for the sick.

In 1897 the Chesapeake and Ohio Railway established at Clifton Forge, for employees of the company, a general hospital of about 100 beds, which continues in successful operation. The Stonega Hospital, begun in 1898 and completed in 1900, was founded by the Stonega Coke and Coal Company as an industrial hospital. It is one of the earliest institutions erected in the state by a corporation for the care and treatment of its employees and their families, free of charge. The original two-story building was in charge of Dr. J. C. Bailey of Pennsylvania, and his wife, a trained nurse. There was an operating room and two wards of eight beds each.[56]

IV. PRIVATE HOSPITALS

The Montaeri Hospital, an institution to be conducted in connection with the Empiric School in Petersburg was announced by Joseph S. Baker in 1831:

"The subscriber having recently purchased of Mr. Edward A. Lynch, his estates on the Appomattox, in the county of Chesterfield, (Cobbs and Mount Airy,) eight miles below Petersburg, four above Bermuda Hundred and City Point, and fifteen from Richmond, respectfully notifies the public that he is in the act of preparing buildings for the accommodation of persons laboring under chronic diseases, as scrofula, epilepsy, &c. &c. and will be ready, after the 15th of January, to receive any additional number of patients. Every facility will be afforded for administering water and vapor baths, galvanism, electricity, the gases, &c.

"Terms—In cases not acknowledged hopeless, the pay will be, *no cure, no pay*, except for board. In confessedly hopeless cases, the pay will be expected to be in proportion to the *relief* given.

"Board from one to $4 per week, according to the accommodation required. The average may be stated at $2 per week. Persons able and willing to render an equivalent for their board in labor, will be allowed to do so.

"In every case of pure dyspepsia, the subscriber will engage to forfeit $50, if he fails to effect a cure, upon physiological principles, as speedily and as effectually as can be done by any empirical remedy whatever—upon condition, however, that the patient rigidly observes the rules prescribed.

[56] Information from Dr. C. B. Bowyer of Stonega, Virginia.

"Patients must be well supplied with clothing; as due warmth and cleanliness are necessary in every curative process.

"Operations connected with midwifery and surgery, will be performed on the poor gratis."[57]

Bellevue Hospital, located on Church Hill at the intersection of Broad and Twenty-second Streets, was Richmond's first private hospital. Opened in June 1854, it occupied a "delightful, airy position" and was "furnished with every convenience. The Lying-in Wards are particularly commodious." Patients were received into the wards for from $4.00 to $5.00 a week, and private accommodation was to be had for from $7.00 to $10.00. These rates included medical and surgical attendance. The physicians in charge were Drs. Frederick Marx, Robert G. Cabell, James Bolton, Francis H. Deane, James Beale, and F. W. Roddey. Edward C. Drew was the first resident physician.[58] In 1862 the hospital was incorporated, the act of incorporation recording that it had been used "recently for the care and treatment of the sick and wounded soldiers of the Southern Confederacy, and . . . as a school of practical instruction in medicine and surgery."[59] Plans for expansion were being considered at the time of the evacuation of Richmond, when the hospital shared the fate of many other worthy enterprises.

The *Virginia Medical Monthly* announced in 1883 that Dr. Hunter McGuire had leased a large structure[60] opposite the Governor's Mansion for his private patients from a distance. According to this announcement, "The household offices of the institution will be managed by ladies, among whom will be found many of the best in the land."[61] Hugh M. Taylor and Lewis Wheat were associated with Dr. McGuire in the management of the hospital, which opened for the reception of patients on April 19, 1883 as St. Luke's Home for the Sick. It accommodated forty-eight patients. There was no operating room in the building for the first ten years of its existence, patients being operated on in their own rooms on a portable table. Open fires furnished the only heat. In 1888 an editorial writer stated that "two resident physicians and seven ladies who are trained as nurses and one or two male nurses are regularly engaged, and special nurses are often required. Miss Walker, a clever and accomplished lady, presides over the nurses. Dr. Hunter McGuire is ably assisted in the management of this institution by his kinsman, Dr. Edward McGuire."[62] In Septem-

[57] Richmond Enquirer, January 1, 1831.
[58] Stethoscope, 1854, v. 4, p. 377.
[59] Acts of the Assembly, 1861-'62, p. 137.
[60] An old hotel known as the Richmond House, on the corner of Ross and Governor Streets, formerly the home of Dr. John Cullen.
[61] Virginia Medical Monthly, 1883-'84, v. 10, p. 66.
[62] Virginia Medical Monthly, 1888-'89, v. 15, p. 780.

ber 1899 St. Luke's Hospital, as the Home was now called, took up new quarters at Harrison and Grace Streets.[63]

About 1888 Dr. Charles G. Cannaday opened the Rebekah Sanitarium in Roanoke. It was located on Elm Avenue close to Jefferson Street and was the first surgical hospital in Southwest Virginia. In 1900 Drs. J. C. Burks and H. E. Jones became associated in its management, and it continued to operate until 1911.[64] In 1896 Dr. Cannaday added to his hospital a "private maternity... for patients requiring a trained nurse and privacy during confinement."[65]

In 1890 Isaiah H. White of Richmond, fitting up several rooms in his own home at 115 East Franklin Street, advertised trained nurses, massage, baths, electricity, and douches, stating that he would receive select female patients for treatment.[66]

In 1899 due to its "extensive patronage," St. Andrew's Home in Lynchburg, the private sanatorium of Drs. Terrell and Lile, was forced to erect a new forty-bed building.[67]

In Abingdon it was 1905 before there was a hospital—a small, private institution, first operated by Dr. E. T. Brady and later taken over by George Ben Johnston and A. Murat Willis of Richmond.

[63] There is an interesting account of this hospital in an address by Dr. Stuart McGuire, delivered in 1929 and published in the Bulletin of St. Luke's Hospital.
[64] E. P. Tompkins: Medical Annals of Roanoke, 1922, pp. 14, 15.
[65] Virginia Medical Semi-Monthly, 1896-'97, v. 1, p. 671.
[66] Virginia Medical Monthly, 1890-'91, v. 17, p. 496.
[67] Virginia Medical Semi-Monthly, 1899-1900, v. 4, p. 478.

CHAPTER XII

EPIDEMICS

THE course of history has been altered repeatedly by death-dealing disease of sudden appearance and sweeping proportions. The pestilences of Egypt, the plague of Athens, the Black Death, the devastating epidemics of the Middle Ages, wrought far-reaching effects. And the end is not yet. Outbreaks of typhus fever, malaria, and cholera continue to appear in such thickly settled countries as India and China; and in this country, with all our vaunted knowledge of the cause, prevention, and control of disease, we are far from secure from similar visitations. The influenza epidemic of 1918, against which we were as powerless as our medieval forefathers, was far more fatal to us than the bullets of the enemy with whom we were engaged at the time. From an historical point of view these facts are sufficient justification for a detailed examination of the epidemics of Virginia during the Nineteenth Century.

I. YELLOW FEVER

Throughout the Nineteenth Century yellow fever continued prevalent in South America and the Antilles, and Bérenger-Féraud records only two years in which it was not epidemic.[1] During this period a vigorous trade between these countries and the United States was carried on, and since the cause of yellow fever was still a mystery it is not surprising to encounter repeated outbreaks of the disease in this country along the Atlantic seaboard. In the North, due probably to stricter quarantine, there were no real outbreaks after 1822.[2] In the far South there were serious epidemics. In Virginia there were no less than thirteen, confined chiefly to the cities on the seacoast, at whose wharves foreign vessels touched. There were nine epidemics in Norfolk, two in Portsmouth, one in Alexandria, and one in Winchester, with scares in Richmond, Williamsburg, Hampton, and City Point.

A severe epidemic visited Norfolk in July 1800, occasioned by the arrival of three infected ships from the West Indies. With great rapidity the disease spread from the neighborhood of the wharves to other parts of the city. Before its ravages were controlled 250 citizens of the town had succumbed. Two ob-

[1] Bérenger-Féraud: Traité Théorique et Clinique de la Fièvre Jaune.
[2] Packard: History of Medicine in the United States, v. 1, p. 15.

servers of the epidemic, Drs. Selden and Whitehead, did not connect the outbreak of the epidemic with the arrival of the ships,[3] and Thomas Newton, Superintendent of Quarantine, was equally unsuspecting. In his report to the governor late in August he stated: "The fever prevailing here proves fatal to many strangers and those unused to this climate. I am fully convinced that it is not imported; the old Inhabitants are as healthy as common at this season of the year."[4]

Yellow fever in a milder form prevailed in Norfolk in 1801, and Newton, again observing its virulence for foreigners, reported: "The emigrants from Ireland suffer most, as they have no friends, and die for lack of good nursing." During these years Dr. James K. Read, health officer for Norfolk, was busily engaged in the inspection of ships in quarantine.[5]

Another epidemic in 1802 claimed several hundred victims. "We had the yellow fever raging very much among us this season," wrote William Couper, a recent arrival from Scotland, "where it cut off many one every day...But I have reason to thank my preserver for preserving me in the midst of 20 or 30 or 40 that died every day, for the matter of seven or eight weeks, and the country were no better. But all is well again, and hardly any complaints to be heard."[6]

In 1803 there was still another outbreak, which reappeared with great malignancy in 1805, according to notes kept by Dr. William B. Selden.[7] Not until 1821 did the fever again make its appearance. In that year on July 20 the *George Armistead,* a vessel from Point Peter, Guadaloupe, laden with sugar, molasses, and rum, anchored in the Norfolk harbor. During the night she secretly sent on shore the bodies of two of her crew, burying them at Sewell's Point; but when the health officer, Dr. Robert Archer, came on board next day her captain declared that the health of the crew had been and still was excellent. Eleven days later cases of yellow fever began to appear in Norfolk in the family of the harbor master in Woodside's Lane. Mr. Price, a warehouse clerk, and a negro cook in the same neighborhood came down with the disease and died. As cases of yellow fever began to appear all along Woodside's Lane, a crowded

[3] William B. Selden and Alexander Whitehead, Medical Repository, 1801, v. 4, p. 329; 1803, v. 6, p. 247.
[4] Calendar of Virginia State Papers, v. 9, p. 130.
[5] Calendar of Virginia State Papers, v. 9, pp. 215, 368, 376.
[6] Wertenbaker: Norfolk: Historic Southern Port, p. 208, quoting letters of Wm. Couper, October 11, 1802.
[7] Report of a Committee of Physicians on the Yellow Fever at Norfolk in 1855, p. 9. Members of this committee, whose report includes a survey of previous epidemics, were: William Selden, Robert B. Tunstall, William J. Moore, S. D. Campbell, Robert H. Gordon, A. B. Williman.

narrow street given over to lewd occupants, and spread into Little Water Street, alarm became general. An exodus of citizens followed, and the mortality was kept to about 160. Contrary to the general belief negroes were affected as fatally as whites.[8] The disease "was confined to the part of the city south of Main Street, and west of Market Square, no case ever having been known to originate out of this, the infected district...persons living in that district had just to remove to the north of Main Street and they were as safe from the fever as they would have been a thousand miles off."[9] Dr. Archer observed that after the *George Armistead* had discharged her cargo, "her bilge water was pumped out in the dock between Southgate's and Warren's wharves, which was found to be so putrid and offensive as to render it expedient that the doors and windows on a neighboring house should be closed."[10] Believing as he did that yellow fever was the result of filth and some mysterious effluvia, Dr. Archer found this circumstance almost sufficient to explain the epidemic to his satisfaction, though it was hard to reconcile this theory with the vastly improved sanitary conditions which existed in the city, with its newly paved and drained streets.

In 1822 there were severe epidemics of yellow fever in New York and Pensacola, and the disease also appeared in New Orleans and in Ohio and Kentucky. At least three times during this year the fever knocked at Norfolk's door, but no epidemic occurred. In August the U. S. frigate *Macedonia,* returning from a cruise in the West Indies, put into Hampton Roads because of the outbreak of "a violent ship fever." Sixty-seven of the crew and ten officers, including Surgeon John Cadle, were dead. Fifty-two others were sick. The ship was promptly quarantined. The sickness continued, and by September 8 the number of deaths on board had swelled to one hundred. A court martial attributed the fever to the change from a cold to a hot climate following taking on water at "the sickly port" of Havana, and thought it was aggravated by allowing the men to sleep on deck.[11] In September the U. S. sloop *Hornet,* also recently returned from a cruise in the West Indies, was ordered to quarantine at Craney Island because of fourteen sick men. By September 13, nine were dead.[12] In November the *Peacock,* with thirty-seven of the crew sick and several dead,

[8] Wertenbaker: Norfolk: Historic Southern Port, p. 209, quoting the report of Dr. Robert Archer, in the Norfolk Herald, March 1, July 22, 1822.
[9] Armstrong: The Summer of the Pestilence, 1855, p. 23.
[10] Report of a Committee of Physicians, p. 10. Dr. Archer's account of this epidemic was reprinted in the Virginia Medical and Surgical Journal, 1855, v. 5, p. 324.
[11] Richmond Enquirer, August 13, 1822; November 26, 1822.
[12] Richmond Enquirer, September 6-13, 1822.

including her medical officer, Dr. Trevett, had to be quarantined at Craney Island.[13]

Four years later, in 1826, another though less severe epidemic than that of 1821 occurred. Little is known of its origin except that residents attributed it to a vessel that had discharged a cargo of damaged coffee.[14] In 1848 three cases, all of officers from recently landed ships, made their appearance. So long had the city been exempt from the disease that not a single practitioner could be found who had ever treated a case. But doubtless the method was not very different from that employed in 1801, when Selden and Whitehead advised large doses of calomel, moderate bleeding, cupping, and cold baths three times a day.[15]

In 1852 there was another epidemic with several hundred cases and between fifty and a hundred deaths. Again the disease first manifested itself near the wharves. It appeared in a row of tenements known as Somers' Row and from there spread over the lower town. Only a few cases occurred north of Main Street. The physicians' committee, which included this epidemic in its 1855 report, was strongly inclined to the belief that the disease was introduced by the *Tascio,* a Spanish bark which arrived on the twentieth of July from Havana, where yellow fever was known to be prevalent. About six weeks later the disease appeared in Portsmouth, with fatal consequences in four cases.[16]

In 1854 there were three cases of the fever in Norfolk, all fatal, and others across the river in the country. At the time there were two merchantmen from New Orleans in quarantine. The ship's carpenter on one was taken with the fever, but recovered.

Virginia's most memorable epidemic occurred in 1855. On June 6 of that year the *Ben Franklin* in distress dropped anchor in the quarantine grounds just below Norfolk. The captain reported to Robert H. Gordon, the health officer, that with the exception of one death from heart disease and another from "exhaustion" the health of passengers and crew had been excellent throughout the voyage. Dr. Gordon's inspection disclosed nothing unusual, but in view of the yellow fever raging at St. Thomas's, from which the ship had sailed, she was ordered to remain in quarantine. Captain and crew were allowed on shore.

[13] Richmond Enquirer, November 12, 1822. During this year two deaths from yellow fever were reported in Brunswick County and five cases in Essex. Here the effluvia which pervaded a house after a long-closed cellar room had been opened was said to have been the cause. Richmond Enquirer, August 20 and October 15, 1822.

[14] Report of a Committee of Physicians, p. 13.

[15] Short history of the yellow fever which prevailed at Norfolk in the months of August, September, and October, 1801, by Selden and Whitehead, Medical Repository, 1803, v. 6, p. 247.

[16] Report of a Committee of Physicians, pp. 14, 15.

On June 18 the captain had the health officer on board again to point out the serious condition of his ship and plead the urgent need for repairs. Inspection at this time showed her to be leaking badly, but clean and apparently free from sickness. Accordingly the quarantine was lifted, and on June 19 she entered the shipyards of Page & Allen at Gosport to be thoroughly overhauled.

On July 5th a boiler worker on the ship became suddenly ill and three days later died with unmistakable signs of yellow fever. Consternation prevailed in Portsmouth, and the ship was immediately ordered back to quarantine.[17]

From this time on events moved rapidly. Other workers on the *Ben Franklin* sickened and died—Francis Jones, James Courtright, and three others, besides two negroes, who had passed a night on board. The disease soon spread on shore. First Mrs. Fox, who lived near Portsmouth at the mouth of Scott's Creek just opposite the *Ben Franklin* during the ship's quarantine, was taken sick; then three residents of a tenement on Water Street immediately connected with the shipyards; and finally the whole of Gosport was attacked.

Although the disease continued to spread in Portsmouth, it did not appear in Norfolk, on the opposite shore, until the middle of July. Not until the thirtieth did the Board of Health become aware of its presence in Norfolk through Dr. George L. Upshur's report of sixteen cases in Barry's Row, a waterfront tenement, inhabited by the poorest people and extremely filthy. Acting on the assumption that contagion could be bottled up in this location, the streets leading to it were barricaded and all intercourse forbidden. Shortly afterwards all the inhabitants of that district, both sick and well, were removed to temporary quarters outside the city limits.[18] On the ninth of August some incendiary started a fire that wiped out the entire infected block. While condemning the act, the populace congratulated themselves that the disease was eradicated. Not so. From this time on its progress was steady and unchecked. "The epidemic wave, extending in a circle as the ripple from a stone thrown into the water, day by day invaded house after house and street after street."[19] It reached its height in the last days of August, continuing unabated until the middle of September. Then it gradually subsided, until frost on October 26 brought it to a close.

[17] Subsequent investigation showed that there had been eight or nine cases of yellow fever and several deaths on board the *Ben Franklin* before she left the docks at St. Thomas's. On the passage there were three cases and two deaths, one body being buried at sea and one after the vessel went into quarantine. The second mate was ill when the first quarantine was lifted and died a few days later of yellow fever. All told there were seven cases and four deaths among the crew after the ship left quarantine. These facts were carefully concealed from Dr. Gordon by the captain. (Report of Committee of Physicians, pp. 22-26.)

[18] Called Oak Grove Hospital.

[19] Report of a Committee of Physicians, p. 35.

The ravages of the disease exceeded anything experienced in the state since the days of Jamestown. At the beginning of the epidemic Norfolk had a population of 16,000. Six thousand persons left the city. Practically the entire remaining 10,000 came down with the disease, only those who had had a previous attack being spared. Negroes proved as susceptible as whites and mulattoes, but with them the disease was seldom fatal. In all there were about 2,000 deaths, and one-third of the white population succumbed.[20] The Black Death of the Middle Ages did not exact such a heavy toll.

To the medical profession there were inexplicable features in this epidemic—the previous good health of the community, the cleanliness which generally characterized the city, the apparently favorable meteorological conditions, the fact that parts of the city inhabited by the wealthier classes were as susceptible as the crowded parts inhabited by the poor, and that dry, clean, well-ventilated, sparsely settled communities were not spared. None of these facts fitted in with contemporary conceptions of the disease. The committee of physicians appointed to study the epidemic reached the conclusion that the disease was imported by the *Ben Franklin;* that "the material cause of the disease was transported by the wind directly from Gosport" to Barry's Row in Norfolk—a distance of about a mile; and that it was "decidedly, not contagious." Their lengthy report ended with the hypothesis that the "material cause is some organic matter endued with the property of rapid reproduction, either in a soil or atmosphere congenial to it, but not capable of being reproduced in the human body. That this matter, whether of animalcular or vegetable character, is a production of tropical regions, and is only spread in temperate climates, when introduced into them by ships."[21]

The horrors of the epidemic were described by the editor of the Norfolk *Herald*: "The city was wrapped in gloom. All the stores, and the dwellings of the absentees, were closed; few were seen passing in the streets on foot, and these on some errand of mercy or necessity.... Most of the inhabitants present were either confined at home by sickness, or in attendance on the sick...and though there was the perpetual din of carriages, continually passing, from early dawn till a late hour of the night—the physicians' carriages, and hacks conveying nurses and members of the Howard Association, and the hearses, and the ever-moving 'sick-wagon'—rattling and rumbling to and fro in every direction —there was no sign of wholesome animation."[22]

[20] Report of a Committee of Physicians, p. 38.
[21] Report of a Committee of Physicians, pp. 42, 43.
[22] Forrest: The Great Pestilence in Virginia, p. 87.

A rigid quarantine was adopted, and many towns cut off all communication with the stricken area. "We have been treated," said the editor of the *Argus*, "with an inhospitality heretofore unknown in Virginia, in having almost every outlet from the place barricaded against us. Our citizens, who have gone to other retreats for safety (though free from disease themselves) have been, in many instances, inhumanly thrust back on our borders."

An invisible force had closed the harbor, and foreign and domestic commerce dared not enter the port. "Look along the water-front of the city," wrote the Reverend George D. Armstrong, an eyewitness. "Wharves and warehouses, with the names of occupants painted in large letters upon their fronts, all appear as usual, saving that their doors and windows are closed, and there is no living thing to be seen about them. The names painted there will, many of them, if they are to give true directions, soon have to be blotted out, and graven instead, upon the sign-stones in the 'city of the dead.' But look along the wharves, where at every season of the year there are many vessels lying, and in the winter and early spring they often line the wharf-heads five or six deep. There is not now one single vessel to be seen afloat, from the draw-bridge to Town-Point. There are the two slender masts of a fishing-smack sunken in the county dock; and here, in this shipyard, there is a vessel drawn up as if for repairs; but there is no shipwright at work upon her...The only boat which enters our harbor now is the little steamer *J. E. Coffee,* run to meet the boats from Baltimore and Richmond in Hampton Roads. By her our mails are carried and all our commerce done. Yesterday she came in with her whole deck piled with empty coffins; and coffins for the dead are one main article of import now...Poor desolate Norfolk! The coming of a ship into her harbor today would cause almost as much surprise to the beholder as did the coming of the ship whose hull first rippled the surface of her waters to the Indian who then dwelt here."[28]

Mr. Armstrong labored through the epidemic, contracted the disease, and recovered only to see four of the seven members of his family swept away in the course of a few days. He has left a moving account of his daily rounds in the stricken city: "A widowed mother and two of her children, all victims of the fever, have been buried from this house within the last ten days, while the three remaining children of that family, all apparently convalescent, were on yesterday removed to the house of an uncle, in another part of the city. In the upper story, there is a maiden lady, with the three orphan children of a deceased

[28] Armstrong: The Summer of the Pestilence, pp. 101-103.

sister, living—or rather, they were living yesterday, but all down with the fever... The children are all better, but the aunt is breathing her last... a sister has stolen away from her own sick son and daughter, that she may close her eyes." He describes another house, with two families living in it, "and all of both families have the fever... a few days ago, I stood at the door and begged a passing physician to come in and prescribe for the sick, but begged in vain; not that the physician was not willing to come, but because he had already more cases in hand than he could properly attend to. In another house all are apparently yielding to medical treatment except Mrs. J., who is now said to be near her end... She does not seem ill today, and yet her physician, who has come from New Orleans, and made this disease his study, tells me she will be dead before tomorrow morning." It is the Sabbath day. "Two of our churches are open today... A mere handful have come up to the Lord's House."

He visits the home of Mr. S.: "When last there, on Friday evening, there were five of the children down with the fever... The mother and another child were taken down yesterday.... The eldest daughter has had the 'black vomit' for several hours... Passing around the corner of the street, here, in this house just before us, there were five sick with the fever yesterday.... Those most ill have been placed in a room by themselves; that if they die . . . their death struggles may not excite . . . those who are recovering."

"We have burials, but no funerals now," he wrote on September 6. "It is the mother we are to bury; and the daughter is now so extremely ill that we dare not let her know that her mother lies dead in the very next room... Enough are present to carry the coffin to the hearse; and... we drive off... at the same rapid pace... The principal grave-digger opens the cemetery gate; but instead of silently pointing us to the grave, as in ordinary times... he now asks, in very much the style of the challenge given by a sentry on guard, 'Who's this?'... Arrived at the lot belonging to the family, we find no grave dug there as yet, so many graves have been ordered today... The hearse cannot wait;... all we can do is to deposit the coffin where the grave is to be dug, and, offering a short prayer, there leave it."[24]

Two effective relief agencies were organized to meet the desperate situation: the Portsmouth Relief Association and the Howard Association in Norfolk. The latter bore the brunt of the distress. Organized for the purpose of establishing hospitals, caring for the sick, and burying the dead, it expended $179,000 contributed by the citizens of Virginia, New York, Pennsylvania, Maryland, and

[24] Armstrong: The Summer of the Pestilence, pp. 76, 78, 79, 81, 82, 83, 84, 97.

other states. Soon after the fever was discovered in Barry's Row a pest house was fitted up at Oak Grove just outside the city limits. A more salubrious site was soon chosen at the Julapi Race Course on Lambert's Point, distant some three miles by land and two miles by water. Here the sick were transferred by lighters and placed under the charge of William M. Wilson, a member of the Association and a young physician of skill and courage. Here about one hundred and fifty patients were treated. At the height of the epidemic the demand for additional and more accessible beds led to the organization of another hospital in the center of the town. The old "City Hotel" was cleaned, furnished, and converted into a hospital and called the Howard Infirmary. Here Drs. E. D. Fenner and C. Beard, volunteer physicians from New Orleans, were of great assistance. The Association also sponsored the Howard Orphan Asylum, first established in the lecture room of Christ Church and two years after the epidemic given a permanent home with extensive grounds in the northern part of the city. One hundred and twenty children, many of them infants at the breast, were thrust upon the Association. The Association also took over the responsibility for housing, feeding, and furnishing transportation to the large corps of volunteer physicians and nurses. By special arrangement these were all provided for at the National Hotel. With the cessation of the epidemic the Association did not end, for it found nearly 500 families dependent upon it and was forced to carry them until the succeeding spring. The final act of the Association was the striking of a gold medal, with appropriate designs of Faith, Hope and Charity on one side and the Good Samaritan on the other, to be bestowed upon Miss Annie M. Andrews and each of the volunteer physicians.

In Portsmouth the U. S. Naval Hospital, with Surgeon Lewis W. Minor in charge, was offered by the government and during the epidemic cared for 587 patients. The Portsmouth Relief Asssociation spent over $85,000, received from all parts of the country. As in Norfolk, medical care, food, and burial services were provided, and orphans of the victims were cared for. The mortality in Portsmouth was about nine hundred.[25]

Naturally the burden fell heaviest upon the medical profession. There were thirty-five physicians in Norfolk and Portsmouth in 1855.[26] But with 10,000 cases of yellow fever in Norfolk and three or four thousand in Portsmouth, more doctors were needed. Volunteer physicians from far and wide, eighty-seven in all, hurried to the help of the stricken city. Twenty came from Philadelphia, ten from Baltimore, seven from New York, three from Washington—a re-

[25] Portsmouth Relief Association Report, pp. 11, 66.
[26] Forrest: The Great Pestilence in Virginia, pp. 231, 232, 248.

markable response of Northern physicians who had little acquired or natural immunity. Georgia sent twelve, South Carolina eight, New Orleans six, Virginia ten. Of the ten volunteers from Virginia eight were from Richmond. The mortality among the physicians was extremely high, especially among the local doctors and those from the North. Of the twenty-five Norfolk physicians ten died, of the ten Portsmouth physicians four died. Twelve of the twenty volunteers from Washington, Baltimore, and New York succumbed, as well as five of the ten volunteers from Virginia. Of the thirty-two volunteers from the far South only three died. Altogether 122 physicians labored in Norfolk and Portsmouth during the epidemic. Forty of them succumbed to the disease.[27]

With the exception of William M. Wilson, who had had the disease, and J. J. Simpkins, who had to leave the city, the entire profession of Norfolk contracted yellow fever, and before the epidemic was over ten Norfolk physicians had fallen victims to it. George L. Upshur (1820-1855), a young man of thirty-five, was consulting physician to the U. S. Marine Hospital and was the first to recognize and treat cases of the disease. For a while the epidemic was spoken of as "Upshur's fever," as most of the cases were in his practice. Working indefatigably, keeping notes upon his cases for future publication, he survived almost to the end of the epidemic, seemingly invulnerable. Writing to a friend, August 22, 1855, he said: "Thanks to a merciful Providence, I remain well, but am pressed to the very earth by my professional duties. This is an epitome of my daily work: from 50 to 60 visits in private practice—a visit of 4 miles to the Fever Hospital (to which I am one of the Physicians) a visit of 2 miles to the Marine Hospital—making a daily ride of 12 miles—and office business enough to keep me from taking any rest from the time I get up until late at night—I am getting thin, but keep up my usual good spirits and remain well . . ." In the same letter he stated: "I am not prepared to say, that, *under no circumstances* can yellow fever be imported into a town, but I do know, that the epidemic now scourging our city *originated in our midst.*"[28]

Dr. Upshur was born in Northampton County, January 14, 1820, the son of John E. Nottingham and Elizabeth P. Upshur Nottingham.[29] He graduated from William and Mary before taking up the study of medicine at the University of Pennsylvania, where he received his degree in 1843. In the twelve

[27] The names of all the physicians, resident and volunteer, may be found in The Great Pestilence in Virginia, by William S. Forrest, 1856, pp. 231-258. The list of the dead is given in the Virginia Medical and Surgical Journal, 1855, v. 5, p. 338.

[28] MS. letter in the possession of Mrs. M. R. Turnbull of Richmond.

[29] His maternal uncle, Judge Upshur, Secretary of the Navy and of State under President Tyler, in order to preserve the family name in Virginia induced young Nottingham to apply to the legislature of Virginia for change of his name.

years prior to the epidemic he established a reputation for careful bedside observation and for medical authorship of more than average ability. In 1844 he married Sarah Andrews, daughter of Dr. Jacob G. Parker, of Northampton County. Dr. John N. Upshur of Richmond was his son.

The roll of martyrs continues with the names of a father and son. Richard W. Silvester (1801-1855), a native of Princess Anne County, had studied under Dr. Fernandez and Dr. Thomas F. Andrews of Norfolk, completing his medical education at the University of Pennsylvania. Worn out with the stiff demands of a country practice in Norfolk County, he moved to Norfolk City to recuperate his health and educate his children and in 1843 resumed the practice of medicine. He was the first physician to fall victim to the fever. His son, Richard J. Silvester (1828-1855), after attending the University of Virginia, graduated in medicine at the University of Pennsylvania in 1854. He had hardly begun practice before he was called to combat the epidemic in all its fury. A witness of his father's death and his brother's approaching dissolution, he, too, became an easy victim of the disease.[80]

Francis L. Higgins was about forty-five years of age when he succumbed to a recurrence of yellow fever in Philadelphia, where he had gone to recover his strength after an acute attack in Norfolk. He was a native of Norfolk, had studied under his uncle, the celebrated Dr. Thomas F. Andrews, and enjoyed considerable local reputation as a surgeon.[81]

Thomas F. Constable (1816-1855) was in the midst of a vacation in the mountains of Virginia when the news of the Norfolk epidemic reached him. As a member of the Board of Health of the city he felt it his duty at once to return to the stricken community, and it was not long before he, too, was seized with a fatal attack. He, also, had been a pupil of the worthy preceptor, Thomas F. Andrews, before graduating in Philadelphia.[82]

Henry Selden (1818-1855), son of William B. Selden, long a prominent practitioner of Norfolk, fought side by side with his older brother, William; but after two months of fighting the epidemic, watching his only sister and his only daughter die of the fever, while his brother and his two remaining children were also attacked, he himself came down with the disease and died. He had studied medicine under Dr. W. W. Gerhard, taken his diploma from the University of Pennsylvania, and served an internship in the Blockley Hospital. The next three years he had spent industriously in Paris before returning to

[80] Forrest: The Great Pestilence in Virginia, pp. 232, 247.
[81] Forrest: The Great Pestilence in Virginia, p. 234.
[82] Forrest: The Great Pestilence in Virginia, p. 238.

his native city, where he showed himself "clear and decided in diagnosis, firm and self-relying in practice."[83]

George I. Halson, aged thiry-seven, a close friend of Henry Selden, was one of the first physicians to succumb to the disease. He had had an excellent medical training under Dr. William B. Selden, followed by graduation at the University of Pennsylvania and service in the Blockley Hospital. He was esteemed by those who knew him as a man of character and parts.

Richard B. Tunstall was another young man cut off in the midst of a career of usefulness. A graduate of the University of Pennsylvania, his first experience was gained in the medical corps of the United States navy on the U. S. S. *St. Mary.* He had hardly resigned to take up practice in Norfolk before the epidemic broke and he suffered a fatal attack.

Junius A. Briggs, another victim, was a young man of promise and liberal education, secured not only in this country but in Europe. In the death of the final victim, Thomas Nash, Norfolk lost "a gentleman of much intelligence and experience."

Across the river in Portsmouth mortality among physicians was equally high. Death claimed John W. H. Trugien (1827-1855) a young man of unusual promise, who is remembered for his indefatigable labors. Richard H. Parker, Martin P. Lovett, and L. F. Nicholson also suffered fatal attacks.

The resident physicians who were attacked by the disease but recovered were William Selden, William J. Moore, Robert B. Tunstall, E. D. Granier, Herbert M. Nash, G. W. Cowdery, F. S. Campos, Thomas I. Hardy, Robert H. Gordon, David M. Wright, V. Friedeman, and D. W. Todd, of Norfolk; J. N. Schoolfield, C. Spratley, G.W. O. Maupin, James L. Hatton, and William J. Cocke, of Portsmouth. In Portsmouth V. B. Bilisoly, a homeopathic physician, and James G. Hodges were the only resident practitioners to escape the sickness.[84]

The Sisters of Charity connected with St. Patrick's Church, Norfolk, were among the first to volunteer as nurses, dividing their forces between the twin cities. They were immediately assigned to duty in the various hospitals, and every account of the epidemic describes their invaluable services.

Miss Annie M. Andrews of Louisiana, visiting relatives in Syracuse, New York, and hearing of the plight of Norfolk, hastened to the city and volunteered as a nurse. Assigned to duty in the hospital, she shrank from no danger or hardship, and it was her example that inspired the great company of other

[83] Virginia Medical and Surgical Journal, 1855, v. 5, p. 425.
[84] Forrest: The Great Pestilence in Virginia, 1856, pp. 230-249.

nurses who shortly afterwards offered their services to the city.[85] All told, there were more than 150 volunteer nurses, many of whom were men. The noble Captain Boyd, performing the duties of the humblest servant to master and slave alike, gave without stint of his strength, as did many others from New York, Philadelphia, Baltimore, New Orleans, Mobile, Charleston, and other cities. Some of them were medical students, others were colored nurses brought from Charleston, New Orleans, and elsewhere.

In November 1855 an editorial in the *Virginia Medical and Surgical Journal* gave some reflections on the recent disaster: "It is a mournful fact that with regard to the cause of the origin of epidemics, we still remain in great ignorance . . . It is now held by the best minds in our ranks, that two elements are required to create the epidemic, the specific poison of the disease, and an appropriate local matrix." As for the local factor the writer believed that could be taken care of by energetic action in enforcing cleanliness, proper drainage, etc. The search for the "specific poison," however, was a harder matter. "It is a vast undertaking. . . . Individuals therefore cannot complete it. . . . Dr. Fenner suggests a government commission and his proposition is worthy of the most serious consideration of the whole nation."

Yellow fever epidemics in other parts of the state were never equal to those which so fatally descended upon the cities of Norfolk and Portsmouth. But the terror of the disease was everywhere, and the occurrence of a few cases in one of the inland cities, even though imported, was sufficient to create consternation.

Outbreaks of yellow fever occurred in Alexandria, in 1800, 1802, 1803, 1804,[86] and 1821. The epidemic of 1803 was described by Dr. Elisha Cullen Dick in the *Medical Repository.* Upwards of one-half of the 6,000 inhabitants left the city. In spite of the fact that "it was singularly limited in its operations" the epidemic continued throughout the summer and was responsible for the death of more than two hundred persons. Dr. Dick attributed it to a very large mass of oyster shells, many of them containing oysters which were found to be in a state of putrefaction, emitting a nauseous effluvia which could be detected from afar.[87] Dr. B. H. Hall also gave an account of this 1803 epidemic, agreeing that it was not imported.[88] The outbreak in 1821 was less severe. Beginning near the wharf in summer it continued to spread until frost. More than fifty persons died of it.[89]

[85] The names of most of these nurses may be found in the Report of the Howard Association of Norfolk, Virginia, 1857, p. 94.
[86] Article by B. H. Hall of Alexandria, Medical Repository, 1805, v. 8, p. 18.
[87] Medical Repository, 1804, v. 7, p. 190.
[88] Medical Repository, 1805, v. 8, p. 18.
[89] Jordan MS., p. 590.

In 1800 Richmond became alarmed over yellow fever in Norfolk, and the Common Council petitioned the Governor to establish an infirmary in which to isolate refugees from Norfolk should they be taken with the fever. No epidemic developed in Richmond.[40] An outbreak of what was said to be yellow fever occurred in the state penitentiary in the summer of 1806, limited to six or seven convicts, with only one death. Pain in the head, red eyes, yellow skin, and black vomit were the outstanding symptoms. Rocketts, the only depot of foreign trade, was unaffected, and the rest of the city remained in a healthy state. Only the convicts, who suffered from "a long train of inconveniences"—damp surroundings, want of exercise, and "a desponding mind"—were affected. Consequently this epidemic was held to support the theory that the disease was of domestic origin and could appear independently of ships from the West Indies. The next appearance of yellow fever in Richmond was in 1855, when many citizens of Norfolk fled from the pestilence there and came down with the disease after their arrival. The cases at this time must have been numerous, for there were no less than twenty deaths among the fugitives alone.[41]

Instances of the inland appearance of yellow fever were reported in Winchester in 1802 and again in 1804. Robert Dunbar of Winchester described the epidemic of 1804, which spread through the Valley of Virginia during the summer and autumn with a high mortality.[42] He considered the first cause of the epidemic to be "marsh miasma, aided by the effluvia emitted from so much vegetable putrefaction, brought powerfully into action by an excessive hot sun."

In 1800, 1802, and 1803 Fredericksburg adopted quarantine measures against yellow fever. Cases occurred in the practice of Drs. French and Carmichael. In every instance the patient had recently been in some infected seaport.[43]

City Point in 1800, fearing the epidemic then raging in Norfolk, asked the Governor for a quarantine officer and urged the establishment of an isolation hospital at Jordan's Point. Petersburg in 1801 became similarly alarmed over the discovery of yellow fever on a vessel from Norfolk. Quarantine measures were immediately instituted and the disease did not spread.[44]

A local outbreak in the Soldiers' Home in Hampton occurred in 1899, with forty cases and eleven deaths.[45] A double line of quarantine was maintained. Old Point and Hampton were quarantined against the Home, and Phoebus,

[40] Calendar of Virginia State Papers, v. 9, p. 132.
[41] Armstrong: The Summer of the Pestilence, p. 187.
[42] Medical Repository, 1805, v. 8, p. 252.
[43] Calendar of Virginia State Papers, v. 9, pp. 129, 137, 322, 325, 366.
[44] Calendar of Virginia State Papers, v. 9, pp. 129, 137, v. 10, p. 501.
[45] Virginia Medical Semi-Monthly, v. 4, 1899-1900, p. 290.

Norfolk, and Newport News took steps against the spread of the disease from Hampton and Old Point. Several Northern cities—Baltimore, Philadelphia, and Boston—quarantined against the Virginia seaports. The efficient work of Health Officer Howe of Hampton, Surgeon Pettus of Old Point, S. W. Hobson of Newport News, and Dr. Hope, quarantine officer of the Elizabeth River district, was applauded.[46]

II. ASIATIC CHOLERA

Asiatic cholera, long endemic in India, became pandemic in Asia between 1816 and 1830, spread to Russia and northeastern Germany, and by 1831 appeared in England. In 1832 it was recognized in America, entering this country through Quebec. It was soon in New York and after that became epidemic throughout the United States.[47]

The disease made its appearance in Virginia in the Tidewater section toward the end of July 1832. Portsmouth, Norfolk, Gosport, Suffolk, Point Comfort, Fortress Monroe, Hampton, and Elizabeth City were visited in rapid succession. Negroes were the chief sufferers, many of them servants "used to the tenderest treatment, and whose manner of living has been unexceptionable." Energetic measures were at once taken to arrest the spread of the contagion. The citizens of Portsmouth laid the town off into wards "for the purpose of a thorough cleansing and purification of all its streets and avenues." The disease was held to be not contagious, "produced entirely by the atmosphere," and was thought to occur "almost exclusively in persons predisposed to take it . . . by excess in eating or drinking, or by debility of the digestive organs."[48] Watermelons were believed to be particularly dangerous, and Norfolk forbade their sale in the markets.

Richmond was forewarned and took precautionary measures. False rumors were put at rest on August 17 by the testimony of a group of physicians who served on the City Board of Health—Drs. George Watson, John Dove, William R. McCaw, Micajah Clark and John Cullen—that no cholera had appeared in the city. Nevertheless, preparations were made for an outbreak, and two hospitals for slaves working in the factories were fitted out by the tobacco manufacturers and were placed under the care of Drs. Haxall, Burton, and Briggs, assisted by a corps of regular nurses. On August 13 the whole city turned out,

[46] Hazen, Charles M.: Yellow Fever in Virginia, Medical Register, 1899, v. 3, p. 138.
[47] Garrison: History of Medicine, p. 796. The appearance of cholera during this year among General Winfield Scott's soldiers on their way to the Black Hawk War led to the sobriquet of the Cholera Campaign. The mortality was one in three.
[48] Richmond Enquirer, August 3, 1832.

"under the advisement of the Common Hall, and under the Supervision of the Inspector of Streets, to cleanse the streets, yards, cellars, offices. . . ."[49]

In spite of all precautions the disease struck the city early in September. On the eleventh the first victim was reported—a negro boy employed in Barclay's tobacco factory. He was said to have "eaten imprudently of pears." After this the epidemic spread rapidly among the negroes and there was a general exodus of citizens. It extended to all parts of the city and reached alarming proportions by the end of the month, when there were as many as seventy or eighty cases and forty to fifty deaths a day. The old academy building on Cary Street was converted into a city cholera hospital and another city hospital was established on Twenty-fourth Street, south of Main.[50] Drs. Selden, Smith, Myers, Tazewell, Beale, and Howard had charge of these hospitals, to which both slaves and free persons were admitted. In addition, the tobacco manufacturers' hospitals were operating, "fitted up in the most comfortable style." Physicians stood loyally by their posts, but in spite of their best efforts the epidemic continued through October, when it was apparently arrested by cold weather.

In the meantime Manchester, Petersburg, and the upper James were experiencing cases of the fatal disease. In Scottsville it appeared chiefly among the boatmen. In Powhatan and Cumberland there were cases. In Halltown, Jefferson County, there were sixteen deaths out of a population of one hundred. Shepherdstown and Harper's Ferry suffered serious outbreaks. In Alexandria a cholera hospital was established in a three-story brick house on the northeast corner of Fairfax and Gibbon Streets. Robert C. Grymes was one of the physicians in charge. A letter from Smithfield reported that "Disease and death still stalk with relentless fury throughout our village. . . . The disease so far has baffled the best medical advice we have." There were twenty-five deaths in two weeks. "It is truly distressing," wrote an observer there, "to listen to the cries, and witness the agonies of the poor blacks at their religious meetings."[51]

The mortality in the larger towns was frightful. In Norfolk there were four hundred deaths of which three hundred were among the colored people.[52] In Richmond there were approximately 498 deaths out of a population of 10,000.[53] In checking the disease the physicians had been helpless. The columns of the newspapers were full of advice from all kinds of sources. From Baltimore had come a letter, suggesting rules for preventing cholera: "Wear a flannel shirt

[49] Richmond Enquirer, August 14, 1832.
[50] Richmond Enquirer, September 18, 1832.
[51] Richmond Enquirer, September 14, 1832.
[52] Richmond Enquirer, September 21, 1832.
[53] Richmond Enquirer, October 23, 1832.

or jacket, flannel drawers and yarn stockings . . . never permit any fruit at all to be in your house, or any vegetable, except rice and well-cooked potatoes." Dr. John L. Cobbs of Cumberland, from his experience in the New York epidemic, advised bleeding from the arm to "restore the equilibrium" of the circulation, followed by opium and calomel. He cautioned against "the ridiculous and murderous practice of pouring down active and diffusable stimulants upon a stomach already inflamed,"[54] and deplored the lack of "correct pathological views" of the disease. Dr. Nathaniel Chapman wrote from Philadelphia, prescribing treatment similar to Dr. Cobbs's, and attributing the disease to "an epidemic agency, of which we know nothing."[55]

Cholera was pandemic again between 1840 and 1850.[56] The second Virginia epidemic occurred in 1849, when the disease again appeared in Norfolk. On the twenty-ninth of May the Board of Health reported twelve cases and four deaths. By the latter part of June forty new cases with ten deaths were being reported each week. The total number of deaths from June 1 to July 17 was sixty-eight. In Portsmouth there were sixty deaths by June 8. About the middle of June cases began to appear in the counties on the York River.[57]

It had been rumored toward the end of January that cholera was in Richmond. The *Whig*, promptly denying this, promised its readers a truthful report should the disease appear. In spite of promises, however, it suppressed the facts when the fever broke out in Norfolk, and as late as May 25, when cholera was actually in Richmond, the paper was busy denying the presence of an epidemic. The legislature, then in session, was not convinced that there was no danger and proposed to adjourn at once to the White Sulphur Springs. Up to this time, however, none of the Richmond physicians had encountered the disease, and their reassurance was sufficient to stem the panic.[58]

The respite was brief, for on June 5 the Board of Health reported seven deaths from the disease, four within the preceding forty-eight hours. The legislature needed no further persuasion to transfer its place of assembly to Fauquier Springs, in spite of editorial scoffing by the *Whig*.

[54] Richmond Enquirer, August 21, 1832.
[55] Richmond Enquirer, August 31, 1832.
[56] Garrison: History of Medicine, p. 797. There were more than 200,000 deaths from cholera from 1848 to 1855. In 1866 there were 1,200 deaths in the United States Army. Journal American Medical Association, 1885, v. 4, p. 281.
[57] Richmond Whig, June 5-July 20, 1849.
[58] A further report on the situation was made to the legislature on May 30 by a committee of physicians consisting of Drs. Dove, Haxall, Minor, Clay, Beale, Deane, Gibson, Cabell, Conway, Bohannan, Gwathmey, Broocks, and Cunningham. They admitted that four or five cases had occurred, but thought they were sporadic rather than epidemic, and did not fear a general outbreak of the disease. Richmond Whig, June 5, 1849.

"We regret to record that this alarming epidemic which visited our State and country for the first time in 1832, has returned upon us for this year, with sad effects," declared a writer in the *Virginia Historical Register*. "It appeared, we learn, at Norfolk, about the 9th of May—subsequently showed itself at the Salt Works on the Kanawha,—and, more recently, has visited our metropolis, and some places in the country,—spreading much distress, with great alarm, and frequent death. Generally speaking, however, the mortality has not been, by any means, equal to that which attended its first visitation."[59]

In Richmond the experience of 1832 had convinced the City Council that emergency hospitals (a source of terror to the poor and ignorant) did more harm than good. They accordingly appropriated $1,500 for free medicines and appointed two apothecaries in each ward to distribute it.[60] Between May 19 and August 11, when the epidemic was declared ended, there were 311 cases and 129 deaths reported by the Board of Health.[61] The blow fell chiefly on the poor. The superintendent of the poorhouse could induce no one to dig the needed graves, and pits had to be resorted to as in 1832. The colored burying ground was so small that many old graves had to make room for new occupants.[62]

The cause of the disease was no better understood than it had been in the previous outbreak. Ozone, camphor, and tar were among the remedies which appeared daily in the newspapers. The *Whig* believed the epidemic would continue until the City Council prohibited the bringing to market of watermelons, cabbages, and cucumbers. The Board of Health, with P. C. Gooch as secretary, urged cleanliness of house and person, a diet of well-cured animal food, rice, bread, and hominy, and the wearing of warm, dry clothes, with flannel next to the skin. It favored the general use of chlorine gas and advised that jars of three parts salt and one part black oxide of manganese, wet with sulphuric acid, be burned in the front hall of each house.[63] President Zachary Taylor issued a proclamation dated July 3, 1849 recommending that the first Friday in August be observed as a day of fasting, humiliation, and prayer.[64]

While the 1849 epidemic was at its height in Richmond, cholera broke out with great severity among the negroes of Hill Carter at "Shirley" on the James

[59] Virginia Historical Register, v. 2, p. 171.
[60] Richmond Whig, July 10, 1849.
[61] These figures were admittedly incomplete, as the physicians were too busy to make full reports. The record of interments during only a part of the epidemic (May 19 to July 7) showed 136 deaths from cholera. Richmond Whig, July 10, 1849.
[62] Richmond Whig, July 6, 1849.
[63] Richmond Whig, June 8, 1849.
[64] Virginia Historical Register, v. 2.

River. "This particular spot, apparently free from all miasmatic influences, high and unusually salubrious, seemed to be singled out. Thirty-one negroes were attacked and died in rapid succession, the disease generally proving fatal in from five to twenty hours. Almost all the worst cases were seized between 1 and 7 o'clock A. M., and they were generally *the nurses of the preceding night.* The cabins were new, neat and freshly whitewashed, and the negroes supplied with every comfort. No prophylaxis nor hygienic efforts availed anything. . . ."[65] The Richmond *Whig,* reporting the outbreak at "Shirley," expressed its astonishment at the appearance of the disease there, since Mr. Carter was noted for the excellent sanitary conditions on his plantation.[66]

The last serious epidemic of which we have knowledge prevailed in Richmond in 1854. Although the records of the superintendent of the public burying ground placed deaths from cholera between June 19 and July 22 at eighty-two, physicians estimated them to be between 200 and 225.[67]

The bacterial cause of cholera was still unknown, but the medical profession had very definite convictions in regard to certain factors connected with it. A writer in the *Stethoscope* stated: "As usual with cholera, it has infested particular localities, while other parts of the city have been nearly exempt. These localities are chiefly a low, damp piece of ground near the state penitentiary; and in that institution a large number of cases of diarrhœa, dysentery and malignant cholera have occurred. . . . It is a very remarkable fact, that the largest number of deaths occurred immediately after a succession of the most violent storms of lightning, thunder, wind and rain, probably, ever witnessed by any citizen now living in Richmond. . . . It is sufficient for us to state here, that without the *epidemic cause* of Asiatic cholera no case of Asiatic cholera can occur. Exposure and imprudence alone cannot produce it. They may and always have produced diarrhœa, dysentery and cholera morbus, but they do not produce Asiatic cholera, unless the cause of Asiatic cholera be superadded."[68] The same writer, answering an assertion that the outbreak was too mild to constitute an epidemic, retorted, "We would like to be informed how many cases in a population of 30,000 would constitute an epidemic. We presume there have been two or three hundred cases, and seventy-five deaths are reported, besides those which have not been reported, within the period of twelve days." The *Virginia Medical and Surgical Journal* considered the number of

[65] Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 40. (A report by Dr. McCaw at a meeting of the Richmond Medico-Chirurgical Society.)
[66] Richmond Whig, July 10, 1849.
[67] Virginia Medical and Surgical Journal, 1854, v. 3, p. 367.
[68] Stethoscope, v. 4, p. 475.

deaths in this epidemic to be fewer than in 1832 and 1849, and pointed out that the disease "passes harmlessly by the sober and useful member of the community . . . and pounces down with fierce malignity on the intemperate, the vicious or the filthy."

In 1866 the usual excitement preceding an expected epidemic prevailed in Richmond. Editorials warned that "the city is foul enough to generate cholera spontaneously,"[69] and pointed out that cities which had taken sanitary precautions had escaped or had few cases of the disease. Suggestions for cleaning the city came from the Academy of Medicine (Drs. Bolton, Deane, and Cunningham) and the Board of Health (Dr. F. W. Hancock, president). On April 20 an ordinance providing for the cleaning of sinks, cesspools, and privies was passed, and the city was divided into two districts with a sanitary officer in charge of each. On May 15 the Board of Health announced that 14,345 loads of debris and garbage had been carted from the city. When the epidemic finally broke about the middle of August, it was much less severe than in former years. Thirty-three cases and thirteen deaths were reported in the papers, but there were in fact not less than twenty-seven deaths and of course many more cases. The Board of Health prohibited certain articles of diet from the markets —oysters, clams, cabbages, and other vegetables—and the city appointed certain apothecaries to dispense free drugs to the poor. Hospital care was furnished for a few indigent whites.[70] Two years later official records showed five deaths in Richmond from cholera. Norfolk and Hampton suffered in both outbreaks.

III. INFLUENZA

The tendency of influenza to appear in epidemic form, to spread rapidly, and to take a heavy toll of human life may be observed frequently in the Nineteenth Century. A "catarrhal epidemic," prevailing throughout the United States from June to August 1802, did not spare Virginia. The symptoms on the whole were slight, with mild inflammatory changes in the throat and ears associated with adenitis and a tendency to suppuration. Characteristic pains were complained of in the chest, back, and limbs. Febrile reactions were moderate.[71]

Moving south from Albany, New York, and Baltimore, the next epidemic occurred in the severe winter of 1806-1807. In Virginia it spread from Winchester to Woodstock, to New Market, to Harrisonburg, where it appeared about the first of September with symptoms of pain over the eyes, aching in the

[69] Richmond Whig, February 9, 1866.
[70] Richmond Whig, October 9, 16, 26, 1866.
[71] Jordan MS., p. 576. Medical Repository, v. 6, p. 100.

bones, soreness of the chest, and coryza. Extreme drowsiness suggestive of encephalitis lethargica occurred in some instances. There was a moderate amount of pneumonia, which was treated with cathartics, emetics, warm drinks, seneca, and the camphorated tincture of opium.[72]

Influenza appeared in Richmond early in September 1807. On September 5 the whole staff of the Virginia *Argus* was laid up, causing a delay in the publication of the paper. A few days later the *Argus* stated that "a large proportion of our citizens are or have been affected by the disease," but that there had been few deaths. It printed the directions for treatment given by Dr. Charles Caldwell of Philadelphia: eat no animal food, imbibe warm drinks, and remain in bed at the onset of the trouble. Care in bleeding and the moderate use of cathartics and "vomits" were enjoined.[73]

The outbreaks of 1812 to 1815 were described in numerous articles as "the winter epidemic." During this period, as James Mann tells us, it was one of the most serious diseases among our troops on all frontiers.[74] Between 1812 and 1813 soldiers stationed in the vicinity of Norfolk developed the disease in great numbers, and many died of it.[75] The epidemic of 1815 appears to have been particularly severe, spreading South and West from New England. Accounts of the epidemics were reported from Norfolk,[76] Loudoun County,[77] Lunenburg,[78] Southampton,[79] King George, and Stafford,[80] and from the city of Richmond.[81] William Singleton described the "fatality and alarm the new disease of 1814 and 1815 has spread through the country, and the little acquaintance we have with the nature of it." At first, he wrote, it was like the "peripneumony notha and typhus. As the summer approached all symptoms except the catarrhal gave way, which became epidemical in 1815."[82]

[72] Peachey Harrison, M.D., Harrisonburg, Virginia; Account of the Influenza in a part of Rockingham County, 1806-'07, Philadelphia Medical Museum, 1808, v. 5, p. 41.
[73] Virginia Argus, September 9, 1807.
[74] Mann: Medical Sketches of the Campaigns of 1812-13-14.
[75] Forrest: Historical Sketches of Norfolk, p. 332.
[76] Forrest: Historical Sketches of Norfolk, p. 332.
[77] Dr. Thomas P. Hereford, Loudoun County, in the National Intelligencer, Washington, April 10, 1815.
[78] Dr. John G. Scott, Lunenburg, Virginia: Account of the Epidemic Fever which prevailed in the South of Virginia in the Winter of 1815, Medical Repository, 1817, v. 18, p. 108.
[79] Dr. William Singleton: Observations on the epidemic fever of the season as it appeared in Southampton, Virginia, 1815-16, Medical Repository, 1817, v. 18, p. 226.
[80] Henry Huntt: Account of a serious epidemic in King George and Stafford Counties, Va., in February, 1815, Medical Repository, 1815, v. 17, p. 397. Huntt used in treatment "Dr. Jennings's vapour bath," patented by Samuel K. Jennings, then of Virginia, later of Baltimore, who wrote a book describing the invention: "Explanation of the nature and cure of Diseases, predicated upon Facts and Experience; presenting a view of that train of thinking which led to the Invention of the Patent Portable Warm and Hot Bath," published in Richmond by Ritchie and Trueheart, 1814. The book received an unfavorable review in the Medical Repository, v. 17, p. 368.
[81] Dr. Joseph Trent of Richmond, in the National Intelligencer, Washington, January 19, 1815.
[82] Virginia Argus, February 9, 1815.

A PATIENT RECEIVING AN APPLICATION OF

JENNINGS' PATENT VAPOR BATH.

Fig. 1. The tubular stove, for directing the heated air into the hollow space made by placing the frame, covered with three or four blankets, over the patient.

Fig. 2. The cups, one of which is filled with alcohol, or spirit of good proof, placed in the stove, and set on fire with a blaze.

Fig. 3. The frame uncovered for inspection.

Note.—If the patient be sponged all over with diluted sulphuric acid, (oil of vitriol,) say two or three drams to a pint of warm water, immediately before applying the heated air, it will be equal to a sulphuric bath, and will cure the itch, and some other affections of the skin. It may be necessary sometimes to repeat the application.

A popular invention of a Virginia physician.

The epidemic was variously designated as epidemic influenza, catarrhal fever, typhus pleurisy, pneumonia typhoides, peripneumonia notha, catarrhal quinsy, and winter fever. In Virginia it was sometimes called the cold plague. A contemporary description states that the disease began with a chill, soreness on moving the eyes, and headache, accompanied by a small pulse, slow labored breathing, and peculiar apathy. It did its work in a few days. If there were complications they appeared as ophthalmia, "cynanche tonsillaris," petechial hemorrhages, and jaundice. Relapses were common, and the terminal stage of the disease was characterized by extreme prostration and lividity. Coma closed the distressing scene. Autopsies were said to have revealed inflammatory changes in the lungs, liver, and brain. The accepted method of treatment consisted of keeping the patient warm, the use of mustard, spirits of turpentine, and cayenne pepper, and the internal administration of opium, calomel, serpentaria, ammonia, and camphor.

Opinion varied as to the efficacy of bleeding. Dr. Joseph Trent was a bold phlebotomist. Of more than three hundred patients attended by him in Richmond during February and March 1815, "more than 60 were bled . . . some twice and nearly all until they grew sick or faint," and only three of his cases proved fatal. "The foundations of innumerable consumptions will be laid by neglecting the lancet," he feared. Citing Drs. McClurg, Foushee, Lyons, Greenhow, McCaw, and Worrol to prove his contention, he stated "the most eminent physicians in this city have bled during the winter."[83] A less ardent believer in the lancet was John Morgan. Cautiously employing bleeding and purges and using no stimulants, he reported equally favorable results in his practice in Richmond.[84]

This epidemic was extremely fatal and took a heavy toll of life in Virginia and elsewhere. Ushered in by alarming symptoms, usually most marked in the throat, the disease failed to yield to diaphoretics, venesection, emetics, purgation, blisters, or Jennings' portable bath. "The prophylactics in this disease, as in all other infectious disorders, should begin and end with cleanliness," wrote Dr. Gray of Tappahannock, but he added: "The effluvia arising from the volatile particles of camphor, asafœtida, onions, garlic, tar, or sulphur, confined in bags, and worn about the neck, have no doubt some effect in keeping at bay, or neutralizing the acrimonious infectious particles, which circulate in the room of sickness." In some instances it ran its course in a few hours, though

[83] Virginia Argus, March 29, 1815.
[84] Virginia Argus, March 1, 1815.

as a usual thing the patient lived from four to five days.[85] In the Northern Neck, pneumonia was a frequent complication—so fatal that it carried off whole families in a day or two. It was common also in the Middleburg cases. William Singleton's later report from Southampton stated that from February to June 1815 quinsies and pneumonias were noted, but that when the disease made its appearance in November of the succeeding fall it appeared chiefly as pleurisy, disease of the throat, or swelling of the joints.[86] It was extremely protean in its manifestations.

Dr. Cornelius Baldwin of Winchester in a letter to the *Argus* described the fatal epidemic of "peripneumonia notha, bastard pleurisy, bileous pleurisy or typhus pleurisy" in his locality and advised against bleeding and blisters. He advocated hot bricks to the back and feet, hot salt or hot bran and vinegar to the breast and sides, camphor, ammonia, and opium by mouth, and sage tea, snakeroot tea, hot toddy, wine whey, and other diaphoretic measures. With abating symptoms a cordial diet was recommended. The contributor modestly adds: "If it has pleased God to lead me into a more successful mode of practice, I attribute it to the Author of all goodness."[87]

A communication to another Richmond paper about the same time fixed the mortality of the "Epidemic Sore Throat" in Essex County as one-third of the white population.[88]

Dr. T. B. Anderson of Caroline County described the winter diseases of his county as being "generally of an active inflammatory character. . . . But in the winter of 1814 the disease assumed a different character and the inflammation, in pulmonary troubles, was located in the pulmonary tissue proper. The great debility and rapid prostration which followed blood-letting or purging would clearly contradict this method of treatment. . . . A resort to the lancet was almost uniformly fatal. My plan was to give an emetic of tartrate antimony, then a mercurial purge, followed by James' powder, seneka and nitrate of potash with free blistering. If the circulation was feeble I gave whiskey freely, and occasionally camphor and serpentaria were used with happy effect."[89]

Insisting on the depleting type of treatment which he had always favored, Gustavus Brown Horner[90] of Warrenton was a victim of "a fever of very high

[85] Gray, Thomas B. W., of Tappahannock: Account of the Epidemic Fever in the "Northern Neck," 1814-'15. American Medical Recorder, 1819, v. 2, p. 28.
[86] Singleton, William: Observations on the epidemic fever of the season, as it appeared at Southampton, Virginia, 1815-'16, Medical Repository, 1817, v. 18, p. 226.
[87] Virginia Argus, February 18, 1815.
[88] Richmond Enquirer, February 25, 1815.
[89] Wingfield: History of Caroline County, p. 116.
[90] Kelly and Burrage: American Medical Biographies, p. 555.

grade, rapid and fatal in its character," which visited Fauquier County in 1815. Fatal influenza was again epidemic in Fauquier in 1831 and 1832. In 1842 still another epidemic occurred, complicated by "pneumonia, true and bastard."[91]

In July 1844 Richmond went through a siege of influenza,[92] which was generally prevalent throughout the state at the time. John F. Peebles of Petersburg referred to "the recent epidemic," its "frequent recurrence" and "the universality of the disease when it prevails," and pointed out the liability of patients to pulmonary complications.[93] Another epidemic in 1846 was known as Tyler's grippe.[94] Still another visitation occurred in 1849,[95] and during the Civil War a type of endemic pneumonia was described, corresponding to our understanding of influenzal pneumonia.[96]

An alarming epidemic resembling the "cold plague" was reported in Northampton County in 1845. Three hundred deaths among the white people occurred in a very short time. The throat and lungs were chiefly affected, and there were apparently many cases of pneumonia.[97]

In the winter of 1889-1890 influenza again swept the state. The daily papers, late in December 1889, carried accounts of the prevalence of "Influenza or La Grippe" in Europe and of its rapid spread to New York, Philadelphia, and Baltimore. By January 1890 the disease had reached Virginia, and epidemics were reported in Richmond, Williamsburg, Norfolk, Lynchburg, Fredericksburg, South Boston, Southampton, and Charlottesville. Nearly every family of Norfolk and Portsmouth had it, and there were a number of deaths, but in general the mortality was low. Four hundred cases were reported in Lynchburg by January 25, and half the population in South Boston came down with it.[98] Fifty thousand cases were said to have occurred in Richmond. Here the profession fell into serious disagreement. Drs. Oppenhimer, James, McGuire, Moore, Brock, Edwards, and Upshur held that the disease was influenza of the same form that had often been epidemic here before. Drs. Hugh Taylor, Christopher Tompkins, and Lewis Bosher maintained that it was "La Grippe"; and as if to settle the argument the *Richmond Dispatch* a little later reported an interview with Edward G. Janeway of New York, who said that influenza and la grippe were the same disease.[99]

[91] Frederick Horner, in the Boston Medical and Surgical Journal, 1845, v. 31, p. 376.
[92] Christian: History of Richmond, p. 147.
[93] American Journal of the Medical Sciences, 1844, v. 7, p. 362.
[94] Jordan MS. p. 635.
[95] Jordan MS. p. 649.
[96] Manson: Endemic Pneumonia of the Confederate States, Virginia Clinical Record, 1872, v. 2, p. 253.
[97] Forrest: Historical and Descriptive Sketches of Norfolk and Vicinity, p. 332.
[98] Richmond Dispatch, December 28, 29, 1889; January 11, 14, 25, 31, 1890.
[99] Richmond Dispatch, January 5, February 9, 1890.

A meeting of the Richmond Academy of Medicine was given over to a discussion of the epidemic. Landon B. Edwards, expatiating at length, declared that it reminded him of "break-bone fever." In Fredericksburg the disease was called by Dr. Doggett "old-fashioned break-bone fever,"[100] and in Williamsburg it was known as "Russian grippe." Headache and muscular pains rather than coryza characterized the attacks.[101] The mortality was low. For the week ending February 12 there was a total of sixty-seven deaths in Richmond, of which only twenty-four were from pneumonia and related respiratory disorders.[102]

IV. PNEUMONIA

In 1814 an epidemic of peripneumonia, or pleurisy, appeared in Brunswick. After that it was said to have made its appearance for eight successive years. In 1819 it was reputed to have modified its form, and to have taken on the nature of typhoid fever. This disease was epidemic at the same time in the neighboring counties of Mecklenburg, Brunswick, and Lunenburg, and was reported by John L. Miller of Brunswick in 1822.[103]

In 1831 N. Snead of Washington County reported an epidemic pneumonia which for two or three successive winters had produced an unprecedented mortality in different parts of Virginia west of the Allegheny Mountains. The antiphlogistic method failing, the author was led to use the lancet until approaching syncope and to maintain that condition for thirty or forty minutes, or as long as it seemed necessary.[104]

Edward F. Williams gave an account of an epidemic of pneumonia in and around Harrisonburg in 1851-52, which displayed many malignant forms. He stated that of thirty-four cases, twenty-one of whom were adults, he had no deaths following a decidedly antiphlogistic treatment.[105] James Logan of Culpeper in 1853 described pneumonia which "prevailed so extensively (and fatally in some sections) as an epidemic during the recent winter and spring."[106] His references to "typhoid pneumonia," "the cold plague and spotted fever," and a "typhoid form of influenza" illustrate a confusion of terminology existing in much of the medical writing of this period. A convenient theory of pleo-

[100] Minutes, Richmond Academy of Medicine, 1890.
[101] Richmond Dispatch, January 11, 1890.
[102] Richmond Dispatch, February 12, 1890.
[103] Miller: An Epidemic Fever, which has prevailed in certain parts of Virginia for the last eight years, Philadelphia Journal of the Medical and Physical Sciences, 1822, v. 5, p. 23. John R. Lucas of Brunswick also described this epidemic.
[104] Transylvania Journal of Medicine.
[105] Jordan MS., p. 645.
[106] Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 189.

morphism satisfactorily explained to the average physician of the day what appeared to be the transition of one type of fever to another.

V. TYPHOID FEVER

Typhoid fever undoubtedly existed on this continent for a long time before it was recognized as such. The continued fevers were confused in the minds of the profession until well into the Nineteenth Century. It was 1829 before Louis gave us the name of typhoid fever, and although his pupil, Gerhard, after his return from Paris to Philadelphia clearly differentiated typhoid and typhus in 1837 it was 1844 before the two diseases appeared as distinct entities in a systematic treatise on disease.[107]

One of the earliest to differentiate clearly the continuous from the intermittent fevers was Alexander Somervail of Essex County. In 1823 he wrote: "Many of my neighbors of the profession, now meet with what they call bilious remittents. In my opinion, however, these are continued fevers. . . . When intermitting and bilious fever was most abundant, there was no continued fever —and I remember well, that the first cases of the latter which I saw, occurred in the Summer of 1790. These were in several families at a distance from the river, and where intermitting fever was seldomest found. Nearly all the family, white and black, were sick one after another before the fever stopped, and none after getting well were taken *sick again.* This fever has some years prevailed extensively. Many families, in 1806, were affected, and in the epidemic of 1814 and 1815, which I considered of that description, none who had the fever of 1806, had that of 1814, nor since we were freed from that has it returned among us." Continued fevers, he concluded, "must arise from some cause different from that which produces intermitting fever. . . ." The summer of 1822 was unusually sickly, with both intermitting and continued fevers prevalent, the latter "very severe, and more fatal." Speaking of the cause of continued fever he said, "unless I am much deceived contagion has also had its share, though not since the year 1815."[108]

Nathaniel Chapman declared that Somervail's "curious observations and ingenious reflections" were "the production of a physician, no less venerable for his learning than for his age"; but Somervail's ideas were not held by the majority of his contemporaries. Expressive of the views of most Virginia physicians of the time was an article by George R. Pitts of Westmoreland in which

[107] Bartlett: The History, Diagnosis and Treatment of the Fevers of the United States.
[108] Philadelphia Journal of Medical and Physical Sciences, 1823, v. 6, p. 276.

he attacked Somervail's position, defended the use of calomel and the lancet, and unequivocally declared that intermittent, remittent, and continued fevers were all phases of one and the same disease.

John Peter Mettauer in 1843 wrote of the continued fever which was epidemic in middle Virginia between 1816 and 1829,[109] describing the "three varieties of this fever" as "the Synocha, the Typhoid and the Typhus," each form prevailing at different times. He stated: "Most of the cases seen and treated by us could be very satisfactorily traced to miasmatic causes; and during the period embraced in this brief history, the disease prevailed as an epidemic more or less extensive in its range." No doubt is to be entertained after reading the description of the autopsies that these continued fevers were typhoid: "The *anatomical characters* which were displayed during our post-mortem examinations were lesions of the glands of Peyer; of the mesentery; spleen; mucous membrane of the small and large intestines; of the peritoneal coat of the small intestines and stomach; of the meninges of the brain, and especially of the arachnoid; effusion of serum, or blood and serum into the ventricles of the brain; congestion or softening of the lungs, and gangrene of the bladder.

Alfred T. Magill of Winchester in 1828 was awarded the annual prize of the Medical Society of the State of New York for an *Essay on the History, Causes and Treatment of Typhus Fever.* Describing several different fevers, none of them true typhus, he considered them due to miasmatic causes and not contagious. Intermittent, remittent and continued fevers were believed by him to be simply different forms of the same disease.[110]

An epidemic of so-called "bilious remitting fever" prevailed in Loudoun County in 1805 and was described by Dr. Thomas W. Smith,[111] who reported 110 cases with five deaths. In 1821 a similar epidemic occurred in Surry County. The symptoms were severe, but it was believed that the disease was simply an aggravated form of the usual autumnal fevers. Treatment was antiphlogistic, diaphoretic measures having proved unsatisfactory.[112]

In the summer of 1825 epidemics occurred in Sussex and Prince George. In this epidemic there was vomiting of bile and a yellow skin which made some consider the disease to be yellow fever.[113]

[109] Practical Observations on Continued Fever as it prevailed in Middle Southern Virginia from 1816-1829, American Journal of the Medical Sciences, 1843, v. 6, p. 33.
[110] New York Medical and Physical Journal, 1829, v. 8, pp. 233, 281; 1830, v. 9, p. 17.
[111] Philadelphia Medical Museum, 1805-1806, v. 2, p. 34.
[112] William H. Finch: Some account of the late Epidemic Bilious Fever as it appeared in Surry County, Virginia, during the fall of 1821, American Medical Recorder, 1822, v. 5, p. 73.
[113] Jordan MS., p. 599.

R. A. Gholson of Greensville, writing as late as 1857 of the continued fever of southside Virginia declared that twenty-five years before there had existed in the minds of most physicians but one fever—"bilious fever affecting but one organ of the body . . . the liver, and requiring but one remedy . . . mercury." Bilious, or periodic fever, he declared, "flourishes most in new and thinly settled countries, teeming with *vegetable life*—continued fever, in old and densely populated countries, redundant with *animal life*." He was confident that continued fever was on the increase, and confessed, "We are comparatively ignorant of its nature, pathology and treatment."[114] Speculating upon whether this Virginia fever was always typhoid, as the French school claimed, he concluded that typhoid is "but one of the varieties of continued fever."

The so-called bilious fevers were often typhoid. Dr. Peachey Harrison of Harrisonburg wrote, long before typhoid was known as such: "Bilious fevers are not natives of our soil. We had our share of them, however, in the extraordinary autumn of 1804. In common seasons, pure remittent and intermittent fevers are scarcely known, at least as generated by causes existing in our own country. They have been caught in other places. We are occasionally visited by fevers, but they mostly prevail in cold weather, and are of typhus character. In the winter of 1805-6, cases of this fever were frequent, and in every instance of which I had any knowledge, they appeared to me to be the offspring of domestic filthiness. They occurred in every instance in circumstances favorable to the accumulation and putrefaction of human excretions—viz: in crowded and unventilated cabins, and in families not remarkable for their cleanliness. Its attacks were slow and insidious, never being completed under eight or ten days. During this time, the patients were not confined to their beds. It generally proved fatal by a determination of blood to the brain."[115]

One of the early records of typhoid fever in Virginia is connected with the University of Virginia. In 1829 an outbreak of fever there caused a cessation of teaching for nearly two months. The epidemic was "very generally regarded as a token of divine displeasure provoked by the supposed anti-religious character of the institution."[116] It aroused great interest in the subject of typhoid, and was one reason for the appointment of Dr. Magill to the chair of medicine. His essay on typhus, just published, had attracted the favorable attention of the faculty. Another outbreak in 1857, with five deaths, was followed by a

[114] Virginia Medical Journal, 1857, v. 9, p. 1.
[115] Philadelphia Medical Museum, 1808, v. 5, p. 41.
[116] Barringer: History of the University of Virginia, v. 1, pp. 117, 126.

general exodus of the student body.[117] The same year there was an outbreak at Hollins Institute, with two or three deaths.

John P. Little of Richmond, writing in 1851, believed that typhoid had existed in some parts of Virginia, particularly the Valley of Virginia, since the beginning of the century. There it generally appeared in mild form during the summer, and since it was the fever of the country it rarely became epidemic. Dr. Little believed it crossed the mountains into Loudoun and Fauquier counties about 1830 and spread east. It appeared in Danville and the country round about in 1845, and the next year was epidemic in Nelson, Albemarle, and Madison. Epidemics appeared again in 1847 and 1848. In 1849 it appeared in Fauquier and other neighboring counties. Great mortality accompanied the epidemic in Albemarle and Madison; whole families were prostrated, both white and black. In some households there were as many as forty or fifty with the disease at one time, and frequently more than one-half of these succumbed. Nurses and night watchers frequently contracted the disease from their patients, giving force to the belief that the disease was contagious.[118]

Frederick Horner of Warrenton, describing the medical topography of Fauquier County, wrote in 1843, "Cases of a typhoid character, and complicated with affections of the great viscera, either of the abdomen, thorax, or head or their membranes, are met with endemically. . . . They are never ascribed to malaria." He reported that "In autumn, 1839, typhus gravior and mitior" occurred epidemically, and again in 1843, attacking the blacks particularly and very fatally.[119]

Alban S. Payne of Fauquier, writing in 1872 upon the epidemics in the Piedmont district, recalled that a gentleman of wealth residing in Fauquier County in 1834 lost thirty negroes from a strange malady, which broke out among them and was characterized by a "dry, red tongue, cool, dry surface, listless look, low muttering delirium, and profound stupor." In 1835 and again in 1837 a similar disease appeared along the Shenandoah River. The outbreaks caused consternation, as "an attack of 'the fever' was recognized as synonymous with death."[120] The mortality was greatly reduced when Dr. John R. Edmunds in 1837 abandoned the old plan of treatment—calomel and venesection—in favor of the French "expectant plan." After 1837 the disease spread through the Piedmont section, sporadic cases appearing annually. In 1857 and 1860 there were a great many cases. An uncommonly fatal epidemic, particularly to

[117] Richmond Examiner, May 19, December 1, 1857.
[118] John P. Little: Abstract of an Essay on Typhoid Fever, Stethoscope, 1851, v. 1, p. 125.
[119] Boston Medical and Surgical Journal, 1845, v. 31, p. 376.
[120] Transactions of the Medical Society of Virginia, 1872, p. 68.

the negroes, broke out in 1871 in the quiet little village of Upperville. Dr. Payne classified his cases as walking cases, typho-malarial cases, and true cases of typhoid fever. In this he was following a custom popular at that time. His conception of the cause of the disease was as faulty as his terms were unwieldy. He believed the cause was twofold, animal poison and vegetable decomposition, which he called by the highsounding names, "per-idio-koino miasm" and "idio-koino miasm."[121]

Typhoid was prevalent in Salem in 1841-1842.[122] About the same time the disease appeared in Roanoke and neighboring counties. Here it was known as the Big Lick Fever. Sporadic cases were seen in Campbell County by A. I. Clarke of Lynchburg in 1843. In 1844 the disease became again epidemic there and in the neighboring counties, reaching its height in 1845, when many persons fell victims to it and whole families were annihilated. It became epidemic again in 1846 and reappeared in 1847, but not so extensively, as a large part of the population had now become immune. Most of the younger physicians were unanimous in their use of the French or expectant method of treatment. The older practitioners who had gone in for the depleting methods —phlebotomy and purging—soon found themselves without patients.[123] In 1849, 1856, 1857, and 1858 the disease was epidemic in Albemarle, and in 1859 in Bath.[124]

In Madison County, "Typhoid fever has several times raged fatally as an epidemic, and sporadic cases of it occur from year to year," wrote Dr. A. G. Grinnan in 1853.[125] It prevailed extensively in 1848 and to a less degree in 1851. "Instances have occurred tending strongly to prove that the disease is infectious to some extent. The cause of its prevalence is involved in obscurity." Typhoid was again prevalent in Madison County in 1852.[126]

In 1884 an epidemic occurred in Richmond. In reporting this outbreak M. A. Rust observed: "When I came to Richmond, thirty years ago [1854], I met an old acquaintance, typhoid fever, in the garb of bilious fever. Bilious fever was then very popular, and went amongst the Richmond German population by the

[121] Transactions of the Medical Society of Virginia, 1872, pp. 68-70.
[122] Jordan MS., pp. 630-631.
[123] Clarke: Typhoid Fever Epidemic of 1844-'47 in Campbell County, Virginia Medical Monthly, 1894-'95, v. 21, p. 336.
[124] Jordan MS., p. 647.
[125] Grinnan: Remarks on the Topography and Diseases of Madison County, Virginia, Stethoscope, 1853, v. 3, p. 129.
[126] James E. Reeves in his Practical Treatise on Enteric Fever, 1859, gives an excellent idea of the current view of typhoid fever, of the prevalence of the disease, and the dates when it was first recognized in the various sections of the state.

name of 'billiard fever.' During the war, or a little while after, it vanished. Certainly I have heard no more of it in the last fifteen years."[127]

Typhoid is said to have first made its appearance in the upper end of Rockingham and the lower portion of Augusta County in 1840-1841. It was then called by the citizens of those localities the "Burkholder Fever," or "Sneaking Fever." The first cases were said to have occurred in the family of a Mr. Burkholder, all of whom died. Burkholder was attacked with the disease shortly after his return from a visit to Ohio in 1840. It was generally believed that he brought the disease home with him.[128]

1893 saw typhoid on the rampage again. It was prevalent in Charlottesville and its suburbs. W. G. Rogers reported cases in his own practice, all but one of which recovered.[129] J. H. Neff in 1893 read a paper entitled *Typhoid Fever as met with in Harrisonburg and its vicinity,*[130] in which he emphasized the fact that typhoid had long existed there and expressed the opinion that among the natives the disease was becoming milder.

W. J. Crittenden of Unionville reported an epidemic of fifty-five cases in his own practice in Culpeper County from July to October 1899.[131]

VI. TYPHO-MALARIAL FEVER

Among the 186 fevers listed by Dunglison in his medical dictionary[132] not the least important was typho-malarial fever, a term which became more and more popular after the middle of the Nineteenth Century and survived well into the first decade of the next. It was used to describe cases of moderate continuous fever with constipation, headache, debility, anorexia, emaciation and slow convalescence, which did not respond to quinine. Some considered it a hybrid disease, some a superimposition of typhoid upon malaria and vice versa. Still others regarded it as an entity unrelated to either. There were constant references to it in Virginia throughout the writings of the period.

[127] Transactions of the Medical Society of Virginia, 1884, p. 112.
[128] A. M. Fauntleroy, Chairman of a Committee on Epidemics of the Valley District: Typhoid Fever, Transactions of the Medical Society of Virginia, 1871, p. 92.
[129] Transactions of the Medical Society of Virginia, 1893, pp. 166-172.
[130] Transactions of the Medical Society of Virginia, 1893, p. 173.
[131] Transactions of the Medical Society of Virginia, 1900, p. 68. A few of the articles on typhoid which appeared in the Virginia Medical and Surgical Journal between 1853 and 1859 are: Typhoid Fever, illustrated by Cases at the College Infirmary, by B. St. George Peachy; The Pathology and Treatment of Typhoid Fever, by Charles W. Ashby of Alexandria; Typhoid Epidemics of Prince George County, Virginia, by Robert Harrison; Treatment of Typhoid Fever, by L. B. Anderson; Diagnosis of Typhoid Fever, by J. B. McCaw; Continued Fever, of an Adynamic Form, popularly called "Typhoid Fever" as met with in Chesterfield County during the present year (1859), by J. Wistar Walke.
[132] Dunglison: A Dictionary of Medical Science, 1874, p. 416.

In 1804 and 1827 epidemics of "remittent bilious fever" occurred in the Shenandoah Valley. Clinical records of these outbreaks were kept by Dr. R. H. Little of Prince William. His grandson, Dr. Frederick Horner, reviewing these records, came to the conclusion that Dr. Little's cases must have been typho-malarial fever, for they were identical with those observed by Horner in an epidemic in Fauquier County in 1887 and described by him as "typho-malarial fever." His own experience with this disease had been extensive during the Civil War, and he believed that the widespread epidemics of 1814-1815, though known at the time as "typhus pneumonia," were in reality typho-malarial fever. In treatment he was a firm believer in cold baths.[183]

Toward the end of the century a few thoughtful physicians openly declared that typho-malarial fever was an atypical form of typhoid fever. In 1884 M. A. Rust of Richmond was one of the first to recognize this fact. He deplored the use of the term "typho-malarial fever" and warned against the differentiation of typhoid from malaria by the therapeutic use of quinine. He argued: "The fact is that quinine cures malarial and does not cure typhoid fever; and if, in a typhoid fever case the dose of quinine is followed by recovery, we must be cognizant that recovery would also have taken place without the dose of quinine."[184]

William S. Gordon of Richmond defended the thesis that typho-malarial fever was really typhoid, in a paper read before the state Society in 1896;[185] and Joel Crawford of Yale, Virginia, read a paper the next year on the same subject.[186] The discussion which followed showed, however, that the body of the profession was still strongly wedded to the old idea. John S. Wellford, J. E. Warriner, Charles W. Rogers, J. A. Hodges, and W. L. Robinson took issue with Dr. Gordon, declaring that typho-malarial fever was a clinical entity which they had often seen and treated.

VII. DYSENTERY

An account of the diseases of Norfolk and Portsmouth states that "Early in June dysentery begins to appear, and prevails more or less throughout this month and July. . . . It is seldom of a severe type, and not often fatal, except

[183] Horner: Epidemic Typho- Malarial Fever, Journal of the American Medical Association, 1888, v. 10, p. 353.
[184] Transactions of the Medical Society of Virginia, 1884, p. 114.
[185] Gordon: Typho-Malarial Fever — What is it? Transactions of the Medical Society of Virginia, 1896, p. 80.
[186] Crawford: Remarks on So-called Typho-Malarial Fever, Transactions of the Medical Society of Virginia, 1897, p. 130.

to teething infants."[137] This statement probably was true of most sections of Virginia during the middle Nineteenth Century.

Dysentery prevailed in Alexandria during the unhealthy summer of 1821.[138] It was an annual visitor in Southwest Virginia, and an epidemic lasting from June to September 1852 was extremely fatal in some sections of the country where it was known to the natives as "mountain cholera."[139] An "adynamic type" of dysentery prevailed in the Northern Neck in 1850, "with considerable fatality."[140] P. R. Reamy reported an epidemic in Henry County in the summer of 1853, particularly resistant to treatment.[141] In the hot months of 1854 many cases of dysentery preceded the outbreak of cholera in Richmond.[142] Dysentery prevailed to an alarming degree in Fauquier and Loudoun Counties during September and October 1863. In some of the public burying grounds as many as four and five interments took place daily.[143] In 1868 the disease was epidemic at Front Royal,[144] and in 1873 it appeared in a malignant form in Amherst County. At the same time "epidemic diarrhœa" attacked hundreds of people in Alexandria.[145]

VIII. MALARIA

It was 1880 before the plasmodium of malaria was discovered and 1898 before the rôle of the mosquito in the disease was demonstrated. Until this time the cause of malaria was wholly misunderstood. Current conceptions of the nature of the disease are recorded in the very synonyms commonly in use—malaria, paludism, marsh fever, the ague, intermittent fever. In Washington in 1857 a Virginian, Matthew Fontaine Maury, attempted an experiment in the prevention of malaria. Between the observatory grounds and the Potomac River he planted a barrier of sunflowers—"as a bulwark against the miasma"—and *mirabile dictu* for the first time in years the residents of that section escaped the annual visitation of ague, "whilst in unprotected situations the shaking went on with its usual energy."[146]

As early as 1873 inquiring minds in Virginia were seeking more light upon the cause of the disease. In that year John Bartlett of Chicago wrote the Medical

[137] Report of a Committee of Physicians, 1857, p. 9.
[138] Jordan MS., p. 590.
[139] Dr. N. Snead: Mode of Abstracting Blood in Dysentery, Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 22.
[140] A. J. Crittenden, Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 243.
[141] Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 557.
[142] Stethoscope, 1854, v. 4, p. 478.
[143] A. S. Payne, Transactions of the Medical Society of Virginia, 1872, p. 44.
[144] Medical and Surgical Reporter, 1868, v. 19, p. 455.
[145] Transactions of the Medical Society of Virginia, 1873, pp. 97, 99.
[146] Richmond Examiner, April 28, 1857.

Society of Virginia for specimens of Stafford's ague plant, believed by him to be the cause of malaria.[147] The reading of his letter provoked considerable discussion and led to the appointment of a committee to investigate the subject. S. K. Jackson of Norfolk stated that he believed spores of the plant could be found upon the mucous membranes of the mouth of persons living in malarious districts, and that he had already begun microscopic examinations of suspicious material. In 1874 William D. Hooper of Lynchburg reported before the Society his investigations upon the ague plant. He related that "Taking a piece of the sod containing a number of the plants to my office, I examined some of them with a quarter-inch objective." He found that the spores had no distinctive features: "I have magnified spores to 1150 diameters, and am certain I could not recognize them if I were to meet with them in any one of the fluids of the body."[148] He concluded that since the plant was to be found in abundance in non-malarious mountainous regions it was not the cause of the disease.

Several years after this the Richmond Microscopical Club was busy examining the blood of frogs recovered from marshes in a similar endeavor to throw light upon the vexed question.

A report in August 1869 of a special committee of the Richmond Academy of Medicine, with James B. McCaw chairman, on "the best method of counteracting the Influences of the Malarial Poison in Eastern Virginia," pointed out that prior to 1861 in this section malaria had almost disappeared due to the drainage of lowlands and the planting of rotating crops, and that it had only returned when the devastation of the Civil War put a stop to the cultivation of the land.[149]

James L. Cabell's report on *Defective Drainage as a Cause of Disease within the Limits of the State of Virginia,* published in 1874 in the *Transactions* of the American Medical Association, discussed the relation of sanitation and drainage to the prevalence of malaria and recommended state-wide effort in draining marshy lands as the best method of ridding Virginia of malaria. It was an important contribution.

Shortly after its reorganization in 1870 the Medical Society of Virginia began the study of the epidemics of the state through committees. One of the most exhaustive reports was that read by A. G. Tebault of Princess Anne upon

[147] Transactions of the Medical Society of Virginia, 1873, p. 24. Virginia Medical Monthly, 1874, v. 1, pp. 19, 20.
[148] Transactions of the Medical Society of Virginia, 1874, p. 41.
[149] Richmond Whig, August 10, 1869.

Paludal Fever in Tidewater Virginia.[150] It was shown that the disease had long been endemic in that area, accounting for a large portion of the annual sick rate. Dr. Tebault in his own practice in the course of four years had seen no less than 514 cases of malaria—114 negro and 400 white patients. This relative immunity of the negro race he explained by maintaining that "the skins and surface glands of negroes are peculiarly transpirable and are prone to excite carbonaceous compounds, even during the reaction of fever."

A similar report was forthcoming from Piedmont Virginia. A. S. Payne in his report stated that in the fall of 1846 intermittent fevers occurred along the water courses west of the Blue Ridge, but that since that time none had appeared. In 1855 intermittents prevailed in Loudoun County. Even on the mountain tops cases were occasionally observed.[151] Of the epidemics of Alexandria, Bedford Brown in 1873 reported that "While malarial fever may be considered as permanently endemic in this region, during the summer and fall months of the past year [1872] it assumed an epidemic form."[152] From his description of the epidemic it is evident that it was typhoid, not malaria. The usual mild intermittents, he said, gradually "verged more and more upon the true typhoid form," and treatment with quinine ceased to be effective.

In general it may be stated that whereas malaria from time to time throughout this period visited all parts of the state, was very disabling in the Tidewater section, and not uncommon even in the Piedmont region, it was better understood and better treated than in the previous century and by 1900 was sharply on the decline. Until late in the century, however, most of the articles on malaria are confused by the general inability to differentiate between different kinds of fever and the belief that one kind could "verge upon" or turn into another.

IX. SMALLPOX

During the Nineteenth Century a number of acts directed toward the control of smallpox passed the Virginia Assembly. In 1814 the governor was authorized to contract with the United States vaccine agent for genuine vaccine matter to be supplied to the citizens of Virginia free of charge, and $600 was appropriated for this purpose. Acting under this authority the governor made arrangements with James Smith of Baltimore to supply the state, but a group of Richmond physicians in 1818, complaining of the inertness of the imported virus, urged the appointment of a resident of Virginia. Dr. William H. Hening

[150] Transactions of the Medical Society of Virginia, 1871, p. 74; 1872, p. 75.
[151] Transactions of the Medical Society of Virginia, 1872, p. 59.
[152] Transactions of the Medical Society of Virginia, 1873, p. 97.

of Richmond was accordingly appointed vaccine agent for the state. An additional vaccine agent, with headquarters at Lewisburg, was appointed in 1850, and the office in Richmond was maintained as late as 1878.

Stringent laws were passed to prevent the spread of smallpox. In 1819 a fine of $3,000 was imposed for importing smallpox or variolous matter. Strict quarantines were provided for, and the practice of inoculation was permitted only after permission of magistrates or of a majority of the householders within two miles had been secured. In 1831 justices were authorized to establish smallpox hospitals and to order smallpox patients to them. In 1871-1872 compulsory vaccination of all pupils in public schools was required,[153] and in 1881-1882 authority to enforce compulsory vaccination was conferred upon the councils of towns and the boards of supervisors of counties.

Jenner's *Inquiry,* reporting the astonishing success of vaccination by cowpox, was published in 1798. Although Thomas Jefferson in Virginia, John Redman Coxe in Philadelphia, and Benjamin Waterhouse in Boston did their best to popularize the new prophylactic, public opinion in America was slow to accept it. Inoculation, the old way of giving immunization, continued to be practised for many years, and vaccination was not commonly resorted to except in the presence of an epidemic. In spite of these facts, smallpox in this country in the Nineteenth Century did not reach the proportions that it had in the preceding hundred years. Toward the last of the century, due to ever improving laws, it may be said to have been reasonably well under control.

In 1800 smallpox was endemic in Norfolk.[154] In 1802 Jennerian vaccination was begun there by Drs. Balfour and Ward, who on March 2 of that year inserted in the *Herald* a notice informing the public that they had "under inoculation several persons with the true kine-pox, the matter certainly genuine."[155] Amid opposition the doctors continued to vaccinate successfully, and a month later they were able to report their success to the local newspaper: "So many attempts had been made before, without success, that even medical men declared they did not believe the disease (cowpox) could be brought here. It will no doubt take some time to remove the obstinate prejudice of the public; but like all great truths, it ultimately must prevail, and surmount every obstacle ignorance can oppose. Eighteen have had the disease (cowpox) in its mildest form, and numbers are under inoculation."[156]

[153] The local school board could suspend the enforcement.
[154] Medical Repository, 1805, v. 4, p. 329.
[155] Norfolk Herald, March 2, 1802, quoted by Wertenbaker: Norfolk, Historic Southern Port, p. 206.
[156] Norfolk Herald, April 13, 1802, quoted by Wertenbaker: Norfolk, Historic Southern Port, p. 207.

In June 1802 the Richmond Common Hall gave notice that Drs. Cringan and McCaw, "having tendered their services to inoculate the poor of this City for the Cow-Pox, Gratis. Resolved, that the Constables be directed to notify the same to the poor in their respective districts, without delay. If the other Physicians within this City, should think proper to inoculate the poor gratis, and will give information thereof to the mayor; he will direct the Constables to notify the poor within their several districts thereof. . . ."[157]

In 1830 smallpox appeared in Fredericksburg, brought there by a company of traveling Indians. William Browne protected thirty of his patients from the epidemic by vaccination, of which he was a strong advocate. In 1834 he reported another less extensive outbreak, this time introduced by a colored boy from Baltimore.[158]

In the winter of 1835 and 1836 the prevalence of smallpox in Richmond injured the hotel business and created uneasiness in the legislature. On May 13, 1836 the Eagle Hotel published in the Richmond *Enquirer* a statement over the signatures of Drs. Robert H. Cabell, Lewis W. Chamberlayne and Micajah Clark, that "when the smallpox prevailed in this city" during the past winter only one case occurred in the Eagle Hotel, and that no contagious disease now existed there. In December 1836 the legislature received a report from Drs. Chamberlayne and Deane concerning the prevalence of smallpox in Richmond, stating that twenty cases were under treatment at that time in the city but that the disease was declining. The City Council advised a general re-vaccination.[159] Some cases were also reported in the neighborhood of Hampden-Sidney at this time.

The disease prevailed in Norfolk to a considerable extent during the first three months of 1848. George L. Upshur, reporting the inoculation of 179 persons, added: "In 1846 I vaccinated a little girl with success; in 1847 I repeated the operation with small result, and in 1848 I vaccinated her again, and she again took the disease. Last spring upon trying it again no impression was produced even locally. She has a brother and sister who each had the vaccine disease perfectly twice."[160]

In 1849 smallpox in a mild form was prevalent in Madison County. Between three and five per cent of the cases died. Varioloid was a frequent complication of vaccination.[161]

[157] Richmond Examiner, June 2, 1802.
[158] American Journal of the Medical Sciences, 1834, v. 15, p. 399.
[159] Richmond Enquirer, December 6, 1836.
[160] Medical Examiner, 1848, v. 5, p. 637.
[161] Grinnan: Topography and Diseases of Madison County, Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 132.

Extracts from a few letters from different parts of the state received in 1852 by the vaccine agent in Richmond, Dr. A. E. Peticolas, give a very good idea of the smallpox scares that were constantly arising, as well as of the limitations of the methods then in vogue to prevent it:

"Dear Sir—Please send *enough* vaccine matter to vaccinate the people of . . . and the surrounding country!"

"Dr. Peticolas will oblige by forwarding *five* or *six scabs* immediately to. . . ."

"There is an alarm of smallpox among us, and you will be so good as to send a *supply* of vaccine matter, to be distributed through our country."[162]

Smallpox scares in Richmond and Charlottesville in 1854 caused Dr. Peticolas to point out the defects of the state vaccine law. He advocated the vaccination of all children soon after birth and a requirement that the successfully vaccinated return the scab to the physician. This would insure an adequate supply of vaccine. He pointed out that in time of epidemic fifty agents could not meet the demand for vaccine matter at a moment's notice.[163]

The "City Hospital" in Richmond, to which one finds casual references during the forties and fifties and which was located near the poorhouse, was probably used chiefly for contagious diseases. Albert Snead, physician there in 1854, reported four cases of smallpox in the hospital during the brief scare of that year.[164]

In the winter of 1855-1856 smallpox was epidemic throughout the state. The demands upon the vaccine agent were particularly heavy, and he had to collect scabs from every reliable quarter to supply the extraordinary demand. News shortly came to him from New Kent County that the virus sent by him "had inoculated those upon whom it was used with both varioloid and small pox." A hurried investigation confirmed the truth of the report, and the agent "with characteristic frankness laid these facts before the Governor" and requested an investigation.[165] Dr. William A. Patteson, who made the investigation for the governor, reported that the disease had been caused by the virus but that the agent was in no way responsible for the unfortunate occurrence. In explanation it was stated that "virus taken from the arm of a person who has small-pox incubating in the system at the time of vaccination, may be modified by the variolous poison, and rendered capable of producing apparent vaccine, varioloid or true small-pox." There was objection to this theory. Wil-

[162] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 345.
[163] Peticolas: The Vaccine Law of the Code of Virginia, Virginia Medical and Surgical Journal, 1853-'54, v. 2, p. 445.
[164] Virginia Medical and Surgical Journal, 1854, v. 3, p. 35.
[165] Virginia Medical Journal, 1856, v. 6, p. 353.

liam W. Parker of Richmond, who had a number of cases in his own practice, wrote at length on the subject. In his cases the same virus was repeatedly used before ill effects were noted, and the arm of a supposedly healthy little girl with no history of an exposure to the disease supplied the virulent matter.[166] William P. Braxton of King William reported at this time one case of smallpox developing among thirty-two persons vaccinated.[167]

In January 1857 the disease appeared in Shenandoah County and soon was reported spreading in Fairfax County and at Woodstock. In February it broke out in Sussex and Southampton, and in April in Harrisonburg,[168] where the town council appropriated $300 to convert an unfinished female seminary into a smallpox hospital.

The disease was again epidemic in Richmond in 1863,[169] and the same year was prevalent in the Piedmont section of Virginia, A. S. Payne reporting about two hundred cases in his own practice. It was Dr. Payne's opinion that vaccination was very effective but should be repeated every seven years. He spoke at length on the epidemic before the state Society in 1872.[170]

The *Virginia Clinical Record* had warned in 1871 that smallpox was spreading rapidly in some of the largest cities and would soon make its appearance in all parts of the country. "In the south its ravages must necessarily be great, for the young negro population is entirely unprotected by vaccination."[171] Its prophecies were soon fulfilled, for late in 1872 an epidemic spread from Washington across the river to Alexandria, affecting chiefly the negro population.[172] By 1873 it had struck Richmond, continuing for several months, between five and nine cases developing each week.[173] The city was prepared for it, having equipped two houses near Hollywood to serve, one as a white, and the other as a colored hospital. The city physician, J. S. D. Cullen, was in charge, and six other physicians were employed to carry on the needed vaccination of the public.[174]

In 1881 there were exaggerated rumors of an epidemic in Richmond which turned out to be limited to five or six cases. The outbreak was attributed to

[166] Virginia Medical Journal. 1856, v. 6, p. 306.
[167] Virginia Medical Journal, 1856, v. 6, p. 459.
[168] Richmond Examiner, January 13, April 28, 1857. Richmond Whig, January 2, 9, February 13, 1857.
[169] A victim of this outbreak was the Norfolk sculptor, Alexander Galt. Christian: Richmond, her Past and Present, p. 239.
[170] Transactions of the Medical Society of Virginia, 1872, p. 44.
[171] Virginia Clinical Record, 1871, v. 1, p. 256.
[172] Richmond Whig, December 30, 1872.
[173] One of the first victims was Edward Lorraine, chief engineer of the James River and Kanawha Canal. Christian: Richmond, her Past and Present, p. 336.
[174] Richmond Whig, January 15, 1872.

infected rags in the paper mills. Compulsory vaccination was required by the city. The next year a more serious outbreak threatened to dissolve the Readjuster legislature, then in session. At the height of the epidemic there were sixty-eight cases among the negroes, four among the whites, and ten deaths, in the course of a single week.[175]

In 1898 authorities at Tazewell had to quarantine against Pocahontas and the coal fields. "Why will not every one submit to vaccination?" came the exasperated complaint from a Virginia medical journal.[176]

X. SPOTTED FEVER

Spotted fever, as epidemic cerebro-spinal meningitis was originally called, was first recognized and described in 1805.[177] From this time until 1830 it was widely observed in the United States. Then there was a lull. From 1854 to 1874 there were again several extensive outbreaks, and since that time the disease has appeared in many places in epidemic form.[178]

The first account of spotted fever in Virginia was given by Robert Dunbar of Winchester. During the winter of 1812-1813 the disease, previously unknown, appeared in the Valley of Virginia. It attacked principally persons between the ages of twelve and twenty. Lassitude, chills, suffused eyes, prostration, and depression of spirits marked the onset. Headache, stiffness of the neck, a petechial eruption, stupor, delirium, and coma followed. The chief therapeutic reliance was placed on blisters to the ankles, the head, and neck. Treatment was usually of little effect, and many succumbed in from three to thirty-six hours.[179]

The *Virginia Argus* in April 1814 ran an article on spotted fever which expressed the belief that "this appalling malady" was due to too much whiskey and attacked only persons "subject to intoxication."[180]

Among troops in Virginia in the Civil War a very fatal epidemic of cerebro-spinal meningitis manifested itself in the Engineers' Camp on the Nine Mile Road five miles from Richmond during the last week in November 1864. "My own observation," wrote Surgeon Vest, "induces me to believe that it is not

[175] A victim of this epidemic was the musician, Caroline Richings-Bernard. Christian: Richmond, her Past and Present, p. 376.
[176] Virginia Medical Semi-Monthly, 1898-'99, v. 3, p. 60.
[177] G. Vieusseux in Journal Géneral de Médicin, 1806, xi, p. 163. The Oxford Medicine, v. 5, p. 72.
[178] Elisha North gave a classic description of the New London epidemic of 1811. Osler's Principles and Practice of Medicine, p. 108.
[179] Medical Repository, 1813, v. 16, p. 357.
[180] Virginia Argus, April 1814.

contagious." The mortality was high, but was lower than that reported by many physicians in other places: "From the 24th of November, 1864 to 1st January, 1865, sixty-two cases of this disease were received into my hospital [in Richmond], twenty-three of whom, were in a moribund condition. Out of the whole number, twenty recoveries took place, which averages the mortality at about sixty per cent."[181]

In 1871 John N. Upshur reported four cases of cerebro-spinal meningitis treated by him in Richmond with only one death, and in 1872 A. J. Terrell in the *Virginia Clinical Record* discusses six cases occurring in his practice. An epidemic occurred in the city of Roanoke in 1895-6. From forty to fifty people lost their lives, death occurring usually in the first twelve hours of the disease. There was an alarming epidemic in Richmond in 1898, with many fatalities.[182]

XI. PUERPERAL FEVER

Puerperal fever, that dread disease which for years had proved so fatal in hospitals all over the world, occurred in Augusta County in 1850. C. R. Harris reported thirty-six cases with seven deaths out of forty-six deliveries in the fall and winter of 1850-51. Evidently Dr. Harris did not know of the work of Dr. Oliver Wendell Holmes, or did not agree with it. He certainly did not believe in the contagious nature of the disease. Said he: "Of the nine cases which escaped the disease, eight were attended by the writer during parturition, and whilst in regular attendance upon those suffering with the epidemic. Several of those attacked, too, were delivered by midwives who had never waited on a patient, either during labor or afterwards, who had suffered from the disease in question."[183] He did believe in phlebotomy and practised it vigorously in all his cases.

Although there are no other records of the epidemic manifestations of this disease in Virginia, many physicians reported their experience with it as it occurred from time to time in their practice. Such accounts were given by P. W. Harper of Dinwiddie in 1818,[184] and by John Peter Mettauer and Goodridge Wilson in 1851.[185] In the last decades of the century, due doubtless to the

[181] R. P. Vest of Richmond: Epidemic Cerebro-Spinal Meningitis, Gaillard's Richmond Medical Journal, 1866, v. 1, p. 314. E. S. Gaillard on p. 204 of this issue lists a number of outbreaks of spinal meningitis in the South during the war. He and Vest agreed on the difficulty of diagnosis and the general lack of knowledge as to the cause and treatment of the disease.

[182] The bacterial cause of the disease was demonstrated by Anton Weichselbaum in 1887, but Simon Flexner did not introduce the serum therapy until 1909.

[183] Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 376.

[184] American Medical Recorder, 1818, v. 1, p. 367.

[185] Stethoscope and Virginia Medical Gazette, 1851, v. 1.

enthusiasm for antisepsis, fresh interest in the disease was awakened, and contributions to the subject were made by M. A. Rust, R. B. Stover, W. R. Cushing, W. H. Ribble, Jr., Virginius Harrison, and Paulus A. Irving.

XII. TYPHUS FEVER

Typhus fever, the camp fever of the Eighteenth Century, although epidemic in this country in the early part of the Nineteenth Century, appearing in New York in 1818, 1825, and 1827, has never been of importance in Virginia. In the many descriptions of the various fevers which were common in Virginia typhus fever is often referred to but must have been almost invariably confused with typhoid fever, meningitis, and other diseases. During the Civil War there was a doubtful case in the Union Army at Yorktown.[186]

XIII. THE CONTAGIOUS DISEASES OF CHILDHOOD

Much was written and said about diphtheria in Virginia after 1850. Many alarming epidemics occurred. For the most part they were badly handled, and the disease continued to take a heavy toll of childhood till the discovery of antitoxin in 1890. Masquerading under the names of "croup" and "putrid sore throat" the disease was probably just as prevalent in the first half of the century. In 1856 cases of "diphtherite" occurred in Charlottesville and were described by Charles Minor. In 1860 the term diphtheria was first employed in the written records of Virginia.

An outbreak of "croup" was reported in Loudoun County in 1807[187] and again in 1854, when there were twenty-eight deaths. In Pittsylvania there were epidemics in 1859, 1860, 1861, and 1862. In the city of Richmond fifty-nine children died of the disease in 1866; in Lee County twenty-seven died in 1880.[188] Edwin Le Cato described an epidemic in Accomac County in 1863,[189] and Philip Winn of Fluvanna wrote on epidemic diphtheria in 1867.[190]

In Richmond in the fall of 1891 there were more than two hundred cases of diphtheria, with a mortality of about thirty per cent. Health authorities exerted themselves to the limit. Lots were inspected, water closets condemned,

[186] "Records do not furnish a single instance of undoubted typhus as having occurred among our [U. S.] troops in the field." Medical and Surgical History of the War of the Rebellion, Medical Volume, part, 3, p. 324.

[187] Thomas W. Smith in this year reported eighteen cases of croup, in which he experimented with the therapeutic applications of phlebotomy. His experience favored the conservative treatment. Philadelphia Medical Museum, 1807-1808, v. 4, p. 31.

[188] Bureau of Vital Statistics, Richmond, Virginia.

[189] American Journal of the Medical Sciences, 1865, v. 50, p. 44.

[190] Richmond Medical Journal, 1867, v. 3, p. 509.

garbage and filth removed from premises and alleys, wild grass cut from the streets. Lime and other disinfectants were scattered in the gutters and down the sewers; "and yet new cases break out with about the same daily rate as before these things were done," observed the editor of the *Virginia Medical Monthly*. This writer advised absolute segregation and recommended Blair's Chloral-Thymol as a gargle, assuring his readers that "the disease has not broken out in but one instance where the preparation was freely used."[191]

Scarlet fever was reported as epidemic in the Valley of Virginia and in Loudoun and Fauquier Counties in 1832[192] and was prevalent in Richmond for six months ending in May of that year.[193] With a high mortality it swept over the city of Alexandria in 1836.[194] In 1840 Richard A. Sale reported an outbreak in Bedford County complicated by a pustular eruption and abscesses in the neck.[195] In 1848 it was widespread in the Northern Neck,[196] and in 1851 in malignant form it appeared in Hampshire County.[197]

Particularly bad were the years 1856 and 1857. Early in 1857 the Richmond *Whig* reported the fatal epidemic then raging in New York, and two weeks later the *Examiner* carried an account of an outbreak in Martinsburg, Virginia. Here the disease had appeared in severe form "for some weeks past to an alarming extent, and a number of children have died." Four deaths occurred in one family in a single week. The epidemic spread over the state. Forty deaths were reported in Lee County in 1856, and sixty-four in Richmond in 1857. Richmond suffered again in 1862, with twenty-five deaths, and Lee County had a second epidemic in 1882, when thirty-five died.[198] Edward A. Morrison of Brunswick County reported that scarlet fever was epidemic in his section of Virginia in 1837, 1839, 1856, and 1858.[199] There were epidemics in Pulaski and the neighboring county in 1859 and 1872.[200]

Epidemics of measles were particularly severe in the Piedmont section in 1849, 1856, and 1863.[201] Dr. Grinnan reported a measles epidemic in Madison County in 1849.[202] In Richmond it was prevalent in 1856, and in 1869 there

[191] Virginia Medical Monthly, 1891, v. 18, p. 609.
[192] H. D. Magill, American Journal of the Medical Sciences, 1839, v. 24, p. 341.
[193] Richmond Enquirer, October 2, 1832.
[194] Jordan MS., p. 623.
[195] Medical Examiner, 1840, v. 3, p. 42.
[196] Crittenden, A. J.: Diseases of the Northern Neck, Stethoscope and Virginia Medical Gazette, 1852, v. 2, p. 243.
[197] Jordan MS., p. 642.
[198] Bureau of Vital Statistics.
[199] Virginia Medical Journal, 1858, v. 11, p. 89.
[200] Bramblett: The Etiology of Scarlatina, Transactions of the Medical Society of Virginia, 1874, p. 49.
[201] Payne, Transactions of the Medical Society of Virginia, 1872, p. 60.
[202] Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 132.

were forty-six recorded deaths from this cause.[203] Another epidemic occurred in November 1872 in Richmond, but it was milder in form, and only sixteen deaths from measles were recorded during five weeks of the outbreak.[204]

Whooping cough, generally troublesome in 1800,[205] was epidemic in Piedmont in 1847 and 1858[206] and was severe in Madison County in 1852.[207] In 1855 there were sixteen deaths from it in Staunton. John P. Little of Richmond wrote an interesting article on the *Beneficial Influence of Vaccination in Whooping Cough* in 1854.[208]

Mumps was said to have "prevailed endemically" in the Piedmont sections during the spring and summer of 1847 and 1848,[209] and was epidemic in Madison County in 1849.[210]

XIV. HIPPOZYMOSIS

An epidemic disease among horses entered this country through Canada in the autumn of 1872. It was popularly called "the epizootic," manifested itself by sore throat and catarrhal symptoms, and when fatal was usually complicated by meningitis. Warnings soon came from Boston, New York, Philadelphia, and Baltimore, where the disease was rampant. Experts agreed that sick horses should be kept warm and dry, well fed and rested. On November 5, forty-eight cases were reported in the various livery stables of Richmond, and in spite of steam inhalations, cathartic draughts, doses of the spirits of nitre, and vinegar rubs to the throat, so many horses came down with the disease that by November 7 the street cars ceased to run. Wheelbarrows, oxen, and hand-drawn carts appeared on the streets, and doctors, parsons, and other folk went about their business on foot. The disease spread over the whole state, but fortunately was in most cases of low virulence and attacked but few human beings.[211]

The epidemic was reported before the Medical Society of Virginia, when it was stated that eight out of ten horses were attacked, with a mortality of about two per cent. It was brought out that the disease "did not spare their owners,"

[203] Bureau of Vital Statistics, Richmond, Virginia.
[204] Richmond Whig, November 13, 20, 1872.
[205] Jordan MS., p. 571.
[206] Transactions of the Medical Society of Virginia, 1872, p. 57.
[207] Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 134.
[208] Stethoscope, 1854, v. 4, p. 320.
[209] Transactions of the Medical Society of Virginia, 1872, p. 59.
[210] Stethoscope and Virginia Medical Gazette, 1853, v. 3, p. 132.
[211] Richmond Whig, October 24, to November 29, 1872.

who usually developed symptoms a month later. Though occasionally fatal in human beings, the disease was less serious than with horses.[212]

XV. VITAL STATISTICS

An act requiring clerks of courts to keep books for the registration of births, marriages, and deaths, and directing commissioners of revenue to collect these statistics from heads of families, physicians, and coroners in their annual rounds to ascertain personal property, passed the Virginia Assembly, April 11, 1853. This was obviously a crude method of obtaining vital statistics, and the figures, particularly those relating to the cause of death, are at best only approximately correct. There was no improvement in the Virginia laws governing these records during the rest of the century. The present act requiring physicians to report all deaths and births to a bureau of vital statistics was not passed until 1912. In spite of these limitations, the early statistics of the causes of death in Virginia are of extreme importance. Even a cursory analysis discloses interesting trends and affords some basis upon which to estimate the progress that has been made in the cure and prevention of specific diseases in the state.

Lee, Nelson, Loudoun, Greensville, and Elizabeth City Counties and the cities of Richmond and Staunton represent widely separated but typical sections of Virginia, and their records are fuller than some of the others. For this reason they were chosen for study. The period investigated covers approximately fifty years, beginning necessarily with the passage of the law of 1853.

The figures relating to typhoid fever first challenge attention. During the fifth decade of the century (1853-1863), in the five counties named, there was an average of five deaths a year. A simple calculation based on the known population of Virginia at that time in relation to the population of the five counties shows that there were between 500 and 600 typhoid deaths a year in the state. In the city of Richmond during the same decade the annual deaths from typhoid were four; between 1860 and 1895 they mounted to twenty-five a year, and in 1896 reached fifty-four. Contrast with these the most recent statistics. Between 1920 and 1930 the state, with double the population of 1860, showed 231 deaths annually from typhoid fever; and the city of Richmond, six times larger than it was in 1850, had but four deaths in 1930 from this cause.

[212] Transactions of the Medical Society of Virginia, 1873, p. 95. The members of the committee who reported the epidemic were D. A. Langhorne of Lynchburg, J. F. Fauntleroy of Leesburg and J. C. Green of Farmville.

The annual reported deaths in the city of Richmond from tuberculosis of all forms steadily increased from twenty-five in 1853, when the city's population was about 30,000, to 275 in 1886, when the population was about 75,000. In 1930 deaths from tuberculosis had fallen to 176, although the population was greater by 100,000. In Staunton there was a rise from two deaths in 1853 to thirty-seven in 1896, with a population less than three times larger. Here also there was a considerable drop by 1930, when, although the population was almost double what it had been in 1896, there were only eighteen deaths from tuberculosis. In the counties, where the population has been almost stationary, the figures do not consistently show the same drop in mortality rates. In remote Lee County, deaths from tuberculosis mounted from three in 1853 to twenty-one in 1896 and twenty-seven in 1930. The same tendency is seen in Greensville County, where the mortality increased from two in 1853 to twenty-one in 1896 and twenty in 1930. In Nelson County, on the contrary, with two deaths in 1853 and fifty in 1896, there were only nine in 1930. In Elizabeth City County, with two deaths in 1853 and 109 in 1896, there were only seventeen in 1930.

Infant diarrhœa as a cause of death in the city of Richmond mounted steadily through the fifty-year period. From thirty in 1853 the deaths reached 155 in 1896. The mortality was reduced to thirty-seven in 1930. In Staunton, deaths from this cause numbered two in 1853, five in 1896, and eight in 1930. In Nelson County infant diarrhœa killed three in 1853, nine in 1896, and six in 1930; in Lee County, two in 1853, ten in 1896, and sixteen in 1930; in Elizabeth City County, one in 1853, fifty-nine in 1896, and two in 1930; and in Greensville County, one in 1853, six in 1896, and one in 1930.

Infant deaths from all causes, which steadily climbed in the counties from 1853 to 1896, have shown marked reductions in the last thirty years. In Greensville County the infant deaths, which rose from seventeen in 1853 to 142 in 1896, fell to six in 1930. In Elizabeth City County the deaths mounted from eleven to seventy, declining by 1930 to twelve. In Lee County, after rising from twenty-seven to forty-nine, infant deaths fell in 1930 to twenty-nine; and in Nelson County a rise from thirty-eight to fifty-four was succeeded by a fall to seventeen in 1930.

Puerperal sepsis in Richmond reached its peak for the Nineteenth Century in 1876, when there were fourteen deaths. There had been one in 1871 and seven in 1896. In 1930 there were seventeen deaths from this cause in the city. In Staunton there was only one death recorded in the twenty years before 1896; there were five in 1930. In Lee and Nelson Counties, between 1853 and 1896

there was an annual average of one death, while there were no deaths from this cause in these counties in 1930. In Elizabeth City County an average of one death in two years before 1900 was increased by 1930 to two deaths a year.

There were five deaths from pneumonia reported in the city of Richmond in 1854, 163 in 1896, 197 in 1930; in Staunton there were four in 1853, nine in 1896, and fifty-nine in 1930. In Elizabeth City County pneumonia deaths for these same years were six, twenty-nine, and forty-seven; in Lee County one, four, and seventeen; in Nelson County eleven, fifteen, and five; in Greensville County one, fourteen, and five.

In the city of Richmond between 1853 and 1896 the average number of deaths reported annually from scarlet fever was 7.8, from measles 5.9, and from diphtheria 16.5. In 1930, in spite of greater population, there were two deaths from scarlet fever, none from measles, and ten from diphtheria. In Staunton during this same period the average number of deaths from scarlet fever was .4, for measles .3, and for diphtheria 1.4, while in 1930 there were no deaths from scarlet fever or measles and only two from diphtheria. In the counties the average number of deaths occurring annually for the period was from scarlet fever, 1.2; from measles 1, and from diphtheria 3.5. In 1930 in the same counties there were no deaths from scarlet fever, 1 from measles, 2.4 from diphtheria. From these figures the present death rate from diphtheria appears to be excessive as contrasted with the pre-antitoxin era.

Meningitis, or brain fever as it was called in the records before 1871, was responsible for sixteen deaths in Richmond in 1853, for eighty-six in 1896, and for twenty-nine in 1930.[213] In Staunton the number of deaths from this cause has remained practically stationary—four in 1859, five in 1896, three in 1930. In each of the counties there were two deaths from meningitis in 1853. In 1896 in Elizabeth City there were six, in Lee three, in Nelson two, and in Greensville three; and in 1930 two in Elizabeth City, three in Lee, and none in the others.

In these old records there are also recorded deaths from yellow fever, smallpox, and cholera. The practical eradication of these formerly serious diseases from our present-day mortality statistics represents a proud chapter in preventive medicine.[214]

[213] Anti-meningococcus serum was of course in use in 1930.

[214] The records in the office of the State Bureau of Vital Statistics, Richmond, Virginia, were kindly put at our disposal by the director, Dr. W. A. Plecker.

CHAPTER XIII

CONFEDERATE STATES MEDICINE

ORGANIZATION

THE care of the sick and wounded has always been a major problem of military operations. In the past it has been customary to say that for every individual disabled by sickness or wounds another was required to take care of him; that in reckoning the total number of ineffectives in a campaign the military casualties have to be doubled to obtain the true number of men withdrawn from active military service. At the time of the World War the medical personnel of the United States army constituted one-tenth the total strength of troops. About one in ten of the medical personnel was a physician. It was customary in advance of a military engagement to make provisions for casualties amounting to at least ten per cent of the troops engaged.

The medical department of an army is concerned not only with the immediate care, transportation, and hospitalization of the sick and wounded but also with the sanitation of camps, garrisons, and troops on the march. The medical officer's duties are both administrative and professional. He is an adviser of line officers. He is an administrator of the affairs of those immediately under him. He is responsible for their discipline, food, shelter, and clothes. He must know sanitary tactics. He must be prepared to do staff duty, to serve in various bureaus or in the theatre of operations, to do his part in dressing stations, field hospitals, ambulance corps, or base hospitals.

The total forces of the Confederate armies did not exceed 600,000 men.[1] To care for this number of troops there were fewer than 3,000 medical officers —834 surgeons and 1,668 assistant surgeons, according to one estimate, a ratio less than one-half that provided for a modern army.[2] Of this number about 755 came from Virginia. In addition the Confederate navy numbered ninety-two medical officers, of whom about thirty-seven were from Virginia.[3] In the whole army there were but twenty-four medical officers who had seen previous military service. To grasp the enormous task of the medical service

[1] The Northern troops numbered about 2,789,893.
[2] Jones, Joseph: Medical History of the Confederate States Army and Navy, Southern Historical Society Papers, v. 20, p. 109.
[3] Register of Officers of the Confederate Navy, 1861-'65.

one must realize that "more than three million cases of wounds and disease were cared for by the officers of the Medical Corps of the Confederate army during the Civil War."[4] From this it can be seen that, on the average, each Confederate soldier was wounded or sick about six times during the war. "One-third of all the men actually engaged on the Confederate side were either killed outright on the field or died of disease and wounds."[5] One-third of the entire army was thus at one time or another receiving medical care for wounds, while most if not all of "the entire body of 600,000 men, were [sooner or later] under the care of the medical department for the treatment of disease."[6]

Virginia's contribution to the medical care of the Confederate wounded was far in excess of that of any other Southern state. Out of a total of 200,000 deaths from wounds and disease, the number of Confederate soldiers killed outright during the course of the war was estimated by Dr. Jones of New Orleans to be 53,973.[7] The number killed on Virginia's soil was 17,093.[8] The total number of Confederate soldiers wounded during the war was estimated by Jones to be 194,026. The total number wounded in Virginia was 91,047. When the wounded from the battles of Antietam and Gettysburg, who were hospitalized in Virginia, are added it raises the total number of wounded cared for in the hospitals of Virginia to 121,946. In other words, about sixty per cent of all the Confederate wounded passed through the hospitals of Virginia.

On April 24, 1861 the Convention of Virginia passed an ordinance organizing the military forces of the state. A medical department, with a surgeon general, ten surgeons, and ten assistant surgeons was provided, and Charles Bell Gibson of Richmond received the appointment as surgeon general. In June all Virginia staff officers were transferred from the state to the Confederate service.[9]

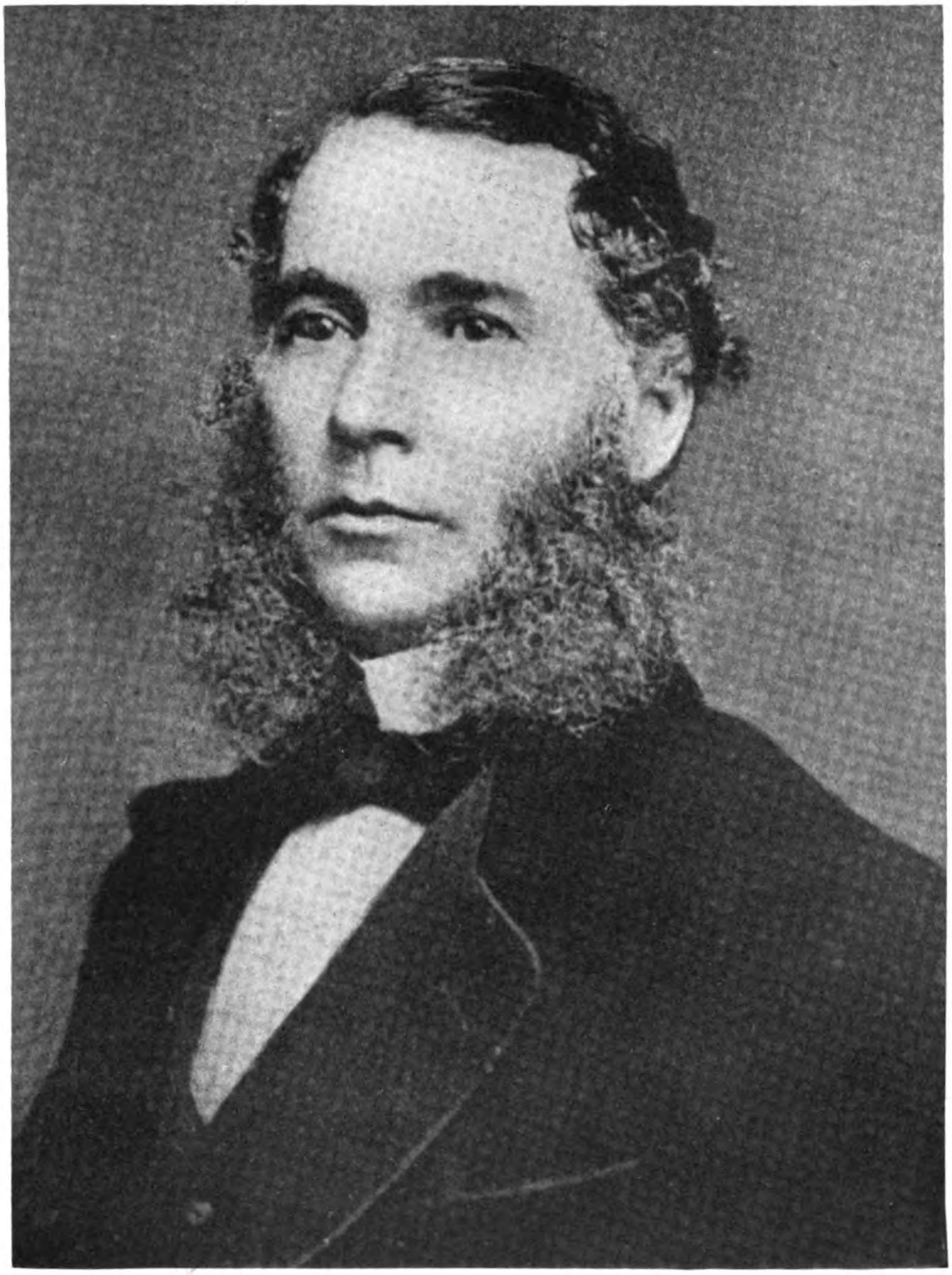
Organization of the medical department of the Confederacy was authorized by act of the Confederate Congress, February 26, 1861, but on April 27 the Secretary of War wrote President Davis that the "medical department of the Regular Army has not yet been organized."[10] As finally effected it was very

[4] Jones, Joseph: Medical History of the Confederate States Army and Navy, Southern Historical Society Papers, v. 20, p. 109.
[5] Jones, Joseph: Medical History of the Confederate States Army and Navy, Southern Historical Society Papers, v. 20, p. 109.
[6] Jones, Joseph: Medical History of the Confederate States Army and Navy, Southern Historical Society Papers, v. 20, p. 109.
[7] Jones, Joseph: Medical History of the Confederate States Army and Navy, Southern Historical Society Papers, v. 20, p. 109.
[8] Medical and Surgical History of the War of the Rebellion, Surgical Volume, part 1, pp. xxxiv-cxl.
[9] War of the Rebellion. Official Records, series 4, v. 1, p. 601.
[10] War of the Rebellion, Official Records, series 4, v. 1, pp. 114, 248.

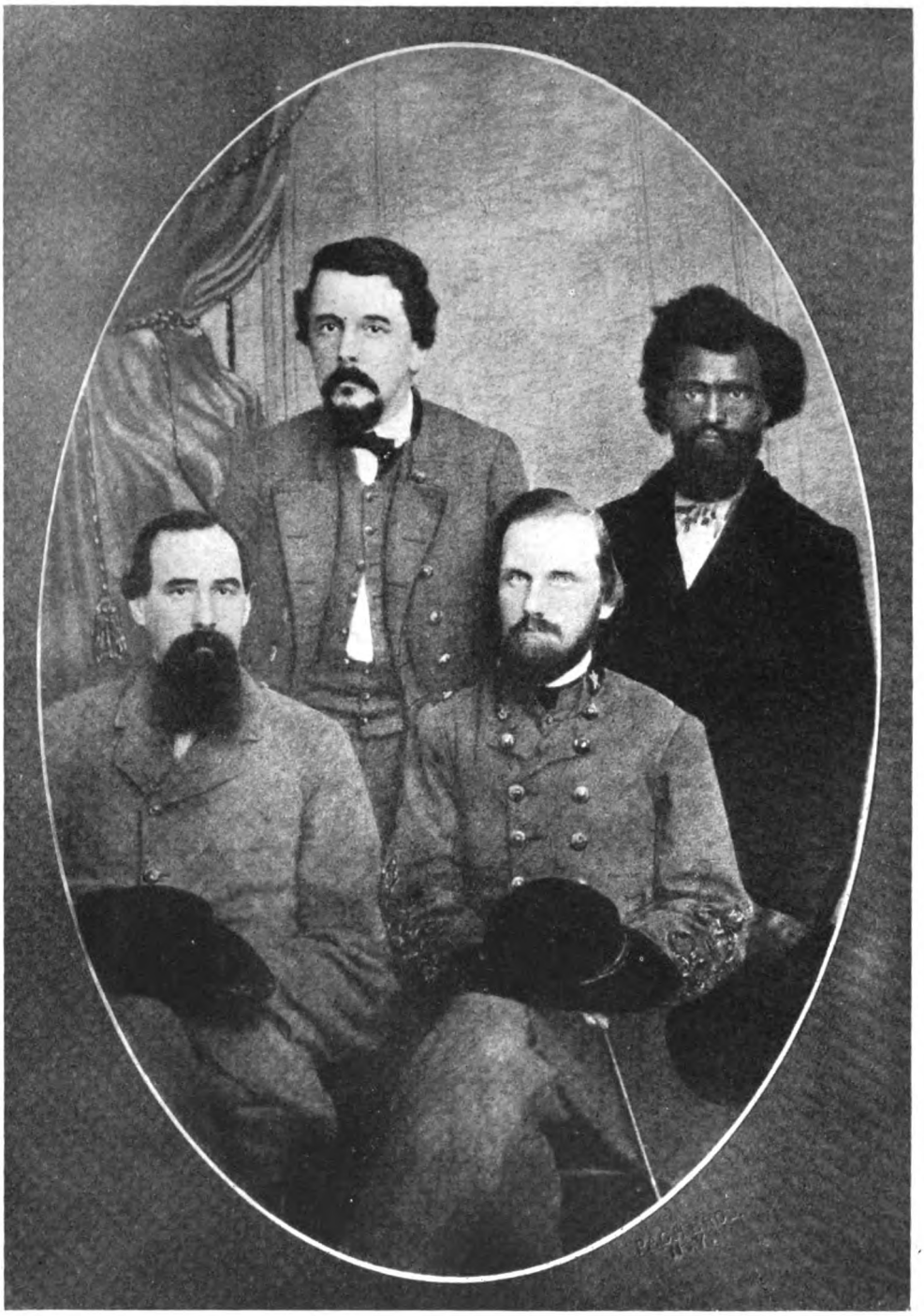
similar to that of the Union army, providing for a surgeon general under the immediate supervision of the Secretary of War, with the rank, emoluments, and allowances of a brigadier general of cavalry.[11] He was charged with the administrative responsibility of the department, the government of hospitals, and the regulation of medical officers at the front. In the field there was a medical director for each army or corps, who was in charge of all medical officers and hospitals in that corps. Under the medical directors were the chief surgeons, one for each division, usually selected from senior brigade surgeons or by recommendation of the commanding general, though the medical director had the power of recommendation. Under them were the senior surgeons, one for each brigade. The directors, chief surgeons, and senior surgeons of brigades belonged to the General Staff rather than to the personal staffs of the commanding generals.[12] The medical organization in the field was completed with the regimental surgeons—one surgeon and one assistant to each regiment. In addition there were inspectors, and there were surgeons serving on medical examining boards. Finally, under the surgeon general, there was the organization in charge of general hospitals, with directors or chief surgeons, surgeons, assistant surgeons, and acting assistant surgeons.[13] In the navy there were surgeons, assistant surgeons, and past assistant surgeons. The army surgeons wore one star on their collars and corresponded in rank to majors in the line. Assistant surgeons ranked as captains. Contract surgeons were graded as second lieutenants, and were temporary. At one time there was an abortive attempt to enlarge the medical department by the creation of assistant surgeon generals and directors, inspectors, and purveyors with the rank of colonel. The personnel of a general hospital included a steward with the rank of sergeant—usually a medical student or some one familiar with drugs—ward masters, one nurse to ten patients, one matron to twenty patients, and one cook to thirty patients.

The administrative officers of the medical department in Richmond in 1863, according to *The Stranger's Guide and Official Directory,* were Surgeon General Samuel Preston Moore and Assistant Surgeon General C. H. Smith, whose offices were on the second floor of the War Department Building on Ninth Street; Medical Director W. A. Carrington and Assistant Medical Director R. S. J. Peebles, whose offices, at first on Ninth Street just above the War De-

[11] Surgeon general received $250.00 a month and was furnished quarters and fuel. The surgeons' pay ranged from $162.00 to $200.00 a month, the assistant surgeons' pay from $110.00 to $150.00 a month. (Statutes at Large of the Provisional Congress of the C. S. A., p. 47.)
[12] War of the Rebellion, Official Records, series 4, v. 1, p. 1024; v. 2, p. 56.
[13] War of the Rebellion, Official Records, series 4, v. 2, p. 425.



SAMUEL PRESTON MOORE
Surgeon General of the Confederate States Army.



MEDICAL OFFICERS OF THE CONFEDERATE STATES ARMY
Kidder Taylor and his body-servant, Ben Harris. Wilson Randolph and John Randolph Page.

partment Building, were moved in 1863 to the Winder Building at Broad and Capitol; Inspector of Hospitals, F. Sorrel; Medical Inspector Edwin S. Gaillard, with offices on the northeast corner of Main and Eleventh Streets; Chief Surgeon J. A. Mason of the Department of Richmond; Senior Surgeon William P. Palmer in charge of the camp for exchanged and paroled prisoners at Camp Lee (Monroe Park); and Surgeon W. A. W. Spotswood, in charge of the medical department of the navy.[14]

The numerous boards upon which medical officers sat, particularly in the capital at Richmond, performed an important though unromantic military duty. The Board of Medical Examiners, set up to pass upon the professional qualifications of applicants for the medical department, had its office over DuVal's drug store at the corner of Main and Tenth Streets. One amusing if somewhat damaging account of its functioning has been given by Surgeon A. Monteiro. He stated that of the five members at the time he took his examination, one had failed to obtain a diploma from the University of Virginia, another owed his promotion to nepotism, and a third was very drunk. "A real Confederate examining board is a very different body of men from the faculties of the University of Virginia and the Jefferson Medical College of Philadelphia," he said. They "held certain doctrines and fine-drawn theories that no other people held." One of them maintained that "gun-shot wounds of the lung should be treated, a la Dr. Langrado, by copious blood-letting. His opponent held the opposite doctrine." Monteiro claimed to have passed his examination by answering questions as to how he would treat such a gunshot wound by tactfully saying that he would follow both methods of treatment.[15]

Military boards composed of hospital surgeons were set up in the general hospitals and in the larger centers to examine applicants for furloughs, to pass upon the disability of the wounded, and to discharge those no longer fit for military service.[16]

Three surgeons, paid at the rate of $4 a day, were assigned in 1862 to each congressional district of each state to examine conscripts. It was required that one be an army surgeon. Camps, each with a hospital and a surgeon, were established for conscripts. Among the rules governing the camps was one which directed that "all conscripts . . . be promptly vaccinated."[17] Early in 1863 the War Department ordered that no exemption be allowed for func-

[14] Spotswood was a native of Virginia and formerly a surgeon in the United States Navy. Carrington, Peebles, and Palmer were also natives of the state.
[15] Monteiro: War Reminiscences by the Surgeon of Mosby's Command, pp. 23-26.
[16] War of the Rebellion, Official Records, series 4, v. 2, p. 570.
[17] War of the Rebellion, Official Records, series 4, v. 2, pp. 163, 237, 605; v. 3, pp. 66, 183.

tional heart disease, loss of one eye, slight deafness, loss of two fingers, hemorrhoids, or general debility.[18] In 1864 exemptions from military service were permitted to physicians over thirty years of age, to superintendents of public hospitals and such physicians and nurses as were declared indispensable, and to one skilled apothecary in each apothecary shop. Dentists were not exempted.[19]

Paper work, the bane of military life, was a tax upon the patience of the Confederate officer, stealing from him hours of rest after the day's work was done, a constant reminder of the despised but indispensable red tape. The regulations of the medical department of the Confederate States, published by the authority of the President, appeared first on November 19, 1861. They required the following reports and returns: monthly reports of sick and wounded, quarterly reports of sick and wounded, consolidated monthly reports of sick and wounded, returns of medical officers, returns of medical and hospital property, abstracts of medical and hospital property, requisitions for medical and hospital supplies, certificates of disability, and hospital muster rolls. Each hospital was required to keep a register of patients, a prescription and diet book, a case book, copies of requisitions, annual returns and reports of sick and wounded, and an order and letter book.[20] "The forms [of reports, records, etc.,] were, in nearly all instances, identical with those employed prior to the war in the United States Army, and the medical regulations were almost literally the same, with the exception, in both cases, of the substitution of the words *Confederate States* for *United States,* wherever the latter occurred."[21]

There is nothing to show that the Confederate surgeon was a stickler for dress. In fact the evidence leads to the belief that often he was glad to have clothes of any sort. "I hear there is some very fine English *officers cloth* for sale in Richmond," wrote Surgeon John B. Fontaine, July 17, 1864. "Ask Dick to go down immediately if not sooner & get enough to make a suit for me for I am as near naked as is prudent in a civilized country or respectable for a Confederate officer to be even in war times." If Surgeon Fontaine's clothes had been made according to regulations they would have consisted of a double-

[18] War of the Rebellion, Official Records, series 4, v. 2, p. 408.

[19] Statutes at Large, Confederate States Congress, February 17, 1864, p. 213. Exemption boards included medical and non-medical members. The medical members of the Norfolk Board were Drs. Swan and Pigott, C. S. A.; of the Portsmouth City Board, Drs. Taliaferro and A. T. Bell, C. S. A.; of the Portsmouth County Board, Drs. James G. Galt and H. J. Butt, C. S. A.; of the Saint Bride's Board, Drs. John T. Baylor and William M. Wilson, C. S. A. (War of the Rebellion, Official Records, series 1, v. 51, part 2, p. 490.)

[20] Regulations of the Medical Department of the Confederate Army, 1861, p. 7.

[21] Medical and Surgical History of the War of the Rebellion, Surgical Volume, part 1, Introduction, p. xxi. George A. Otis, formerly a practitioner in Richmond, who edited this history, stated that the Confederate medical records were kept "with commendable exactness."

breasted gray tunic extending half way to the knee, faced with black, with a stand-up collar and two rows of buttons on the breast; a black cravat; loose blue trousers with a black velvet stripe bordered with a gold cord; French kepi or forage cap bearing the letters "M.S." embroidered in gold and embraced in two olive branches. A star on the tunic collar, three rows of gold braid on the sleeve, Jefferson boots, white gloves, sword belt, and green silk sash would have completed the regalia.[22]

At the head of the whole medical department was Surgeon General Samuel Preston Moore (1813-1889). He was born in Charleston, South Carolina, the son of Stephen West and Eleanor Gilbert Moore. He was educated in Charleston, graduating in medicine in 1834. Entering the army in 1835 as assistant surgeon, he served in the Mexican War and was promoted to the rank of surgeon. He resigned from the military service of the United States army in 1861 and was soon afterwards made surgeon general of the Confederate States army. Not only did he ably direct the medical department during the whole period of the war, but he was influential in organizing the Association of Army and Navy Surgeons of the Confederate States Army, directed the preparation of *A Manual of Military Surgery,* and actively promoted the *Confederate States Medical and Surgical Journal.* After the war he made his home in Richmond, although he did not practise. He became interested in a number of educational organizations, serving on the executive board of the Virginia Agricultural Society and on the Richmond School Board. He was president of the Association of Medical and Surgical Officers of the Army and Navy of the Confederate States in 1874 and vice-president of the section on military and naval surgery at the Ninth International Congress of Medicine held in 1887. He died at his home, 200 West Grace Street, on May 31, 1889.

He was a handsome man, tall and erect, of impressive military bearing. He was criticized at times for the rigid discipline he enforced in his department. "But where, or under what government so complicated and extensive as this," asked one of his admirers, "was there ever a department of the public service characterized by such order and precision? Every paper emanating from that office was a model of despatch and neatness."[23]

1. AT THE FRONT

Closest to the line of battle was the assistant surgeon. He was with the troops on the march and he was with them when they went into battle. Of his

[22] Uniform and Dress of the Army of the Confederate States, as prescribed by General Orders in June 1861 and Article XLVII of Army Regulations; published by R. E. Lee Camp No. 1. Miller: Photographic History of the Civil War, v. 7, p. 350.

[23] Southern Historical Society Papers, v. 17, p. 12; v. 29, p. 273.

life and duties William H. Taylor wrote from personal experience: "Our regiment had two medical men, a surgeon and an assistant surgeon. There was also a hospital steward—a kind of apothecary, whose duty it was to take charge of the case of medical and surgical supplies, and to prepare, or dole out, what was prescribed, and to act as general assistant to the surgeons. In addition, there was a man, familiarly styled the knapsack-toter, who carried a knapsack containing small quantities of the most generally useful medicines, bandages, isinglass plaster, etc., and whose special duty it was to be with the assistant surgeon on the battle-field. We also, of course, had stretcher-bearers to convey the wounded to the ambulances. . . .

"Early in the morning we had sick-call, when those who claimed to be ill or disabled came up to be passed upon. Diagnosis was rapidly made, usually by intuition, and treatment was with such drugs as we chanced to have in the knapsack and were handiest to come at. . . . On the march my own practice was of necessity still further simplified, and was, in fact, reduced to the lowest terms. In one pocket of my trousers I had a ball of blue mass, in another a ball of opium. All complainants were asked the same question, 'How are your bowels?' If they were open I administered a plug of opium, if they were shut I gave a plug of blue mass. . . .

"On the battle-field our stock of medical and surgical supplies was particularly condensed. As for the latter, we had chiefly a pocket-case of instruments, plaster and bandages. Bandages were plentiful, but we seldom had splints. We could usually find some makeshift for these. On one occasion I used a whole fence-rail for a broken arm. . . .

"Our surgical work was usually very simple. . . . It consisted chiefly of the application of plaster and bandages and the administration of stimulants, and superintending the placing of the badly wounded in the ambulances for transportation to the field hospital. . . .

"Normally, we were scant of medicines, and, generally, they were of the commoner kinds. At times, however, we were well supplied, and with excellent preparations. These times would be when captures had been made, or medicines of Northern or European manufacture had come through the blockade. The Confederate pharmaceutical laboratories worked industriously, but under great disadvantages, and their output was, in many directions, not surpassingly excellent. Among other things they made blue mass. This would have been a very satisfactory product could its components have managed to keep themselves in harmonious juxtaposition; but, as it was, it would not be long after the mass reached us before the mercury seceded from the rest. . . .

"Our most valued medicament was the alcoholic liquors, which were furnished to us sometimes in the form of whiskey and at other times of apple brandy. These preparations were esteemed by the surgical staff very generally as a specific for malaria especially . . . to which the surgeons with whom I was associated believed themselves to be peculiarly susceptible . . . by instituting a grand sanitary soiree on the night of the day on which the supplies arrived in camp . . . we would tone up our systems and corroborate our constitutions by drinking up every drop of the prophylactic before morning."[24]

Assistant Surgeon John B. Fontaine accompanied Stuart on his memorable raid of June 1862. The latter, reporting to General Lee, wrote: "Assistant Surgeon J. B. Fontaine, Fourth Virginia Cavalry (the enemy giving him little to do in his profession), was bold and indefatigable in reconnaissance." In recommending him for promotion he added that "Dr. Fontaine is a man of signal military merit and an adept in his profession."[25] Fontaine became medical director of the cavalry corps and was killed in action October 1, 1864.

While the assistant surgeon was giving first aid on the field of battle the regimental surgeon in some protected place behind a hill or in a gully was doing the work of the regimental hospital. Here probably most of the major surgery of the war was performed, particularly the amputations. Surgeon Spencer Glasgow Welch of South Carolina wrote to his wife from Ox Hill, Virginia, September 3, 1862: "Jake Fellers had his arm amputated without chloroform. I held the artery and Dr. Huot cut it off by candle light. We continued to operate until late at night. . . . We filled the carriage house, barn and stable with our wounded, but I could do but little for them."[26] During the battle of the Wilderness, May 7, 1864 he wrote: "After night Major Hammond rode up to where we doctors were and told us that about two miles to the rear there was a poor Yankee who was badly wounded. He insisted that some one of us go back to help him. I went, and found him paralyzed from a shot in the back. I gave him water and morphine, and made him comfortable as best I could."[27]

Referring to the resourcefulness of the Confederate surgeon, Dr. Hunter McGuire wrote long afterwards: "The pliant bark of a tree made for him a good tourniquet; the juice of the green persimmon, a styptic; a knitting needle, with its point sharply bent, a tenaculum, and a pen-knife in his hand, a scalpel and bistoury. I have seen him break off one prong of a common table fork,

[24] Taylor: De Quibus: pp. 302, 316, 318, 319, 320, 330.
[25] War of the Rebellion, Official Records, series 1, vol. 11, part 1, pp. 1039-1041.
[26] Welch: A Confederate Surgeon's Letters to his Wife.
[27] Welch: A Confederate Surgeon's Letters to his Wife.

bend the point of the other prong, and with it elevate the bone in depressed fracture of the skull and save life. Long before we knew the use of the porcelain-tipped probe for finding bullets, I have seen him use a piece of soft pine wood and bring it out of the wound marked by the leaden ball."[28]

Quite a different side of the picture of the medical service in the field is given in *War Reminiscences by the Surgeon of Mosby's Command.*[29] It relates how Colonel Mosby, despising the slow course of military channels, secured Surgeon Monteiro's transfer from Wise's Brigade to his own command. Medical Director Guild did not at first accede to the Colonel's request in this matter and brought upon himself the wrath of that hot-headed officer. "This is infamous red tape," Mosby blurted out. "This is the devil's work in all military matters. This red tape is the halter of stupidity and indolence that has strangled General Lee and starved the armies of the South. I shall not submit to it. You shall at once grant what I ask, or I will get an order from the Secretary of War." Without further ado Surgeon Monteiro was transferred.

The work and responsibility of the medical directors in the field are reflected in their correspondence with the surgeon general and in the various orders they issued. General Lee's report of the Seven Days' Battles in 1862 commended Surgeon Lafayette Guild, medical director of the Army of Northern Virginia, and other staff officers for having "attended unceasingly to their several departments," extending his thanks "to the whole medical corps of the army . . . for the care and attention bestowed on the wounded."[30]

Soon after the Seven Days' Battles Guild complained of his subordinates' failure to make proper reports. There were "no reports . . . from Surgeon Cullen, chief surgeon of General Longstreet's division, or from the chief surgeon of General Jackson's command." Medical officers "had failed to supply themselves with the means for keeping a list of casualties." He deplored the fact that the supply of medical officers was inadequate: there should be at least one surgeon and two assistant surgeons with each regiment. He enclosed an inventory of captured medical and hospital supplies.[31]

After the battle of Malvern Hill Guild reported "great difficulty in removing our wounded to Richmond. When their removal was nearly accomplished General Lee ordered that I should give assistance to the Federal medical officers in concentrating their sick and wounded at some central point, where surgical

[28] President's Address to the Southern Surgical and Gynecological Association at Nashville, November 13, 1889, Southern Historical Society Papers, v. 17, p. 3.
[29] Monteiro: War Reminiscences by the Surgeon of Mosby's Command, pp. 16, 17.
[30] War of the Rebellion, Official Records, series 1, v. 11, part 2, p. 498.
[31] War of the Rebellion, Official Records, series 1, v. 11, part 2, p. 501.

aid could be more efficiently rendered. . . . I selected Savage Station, on the York Railroad. Of course there are many Federal wounded that cannot be moved yet, and . . . our transportation is very deficient."[82]

On September 21, 1862, after the battle of Antietam, general orders directed that "Hospitals for the sick and wounded will also be provided by securing neighboring barns or buildings sufficiently commodious, and surgeons placed on duty with them." This was also the responsibility of Medical Director Guild.[83] During the battle of Fredericksburg, December 1862, due to overcrowding of refugees in the farmhouses and the serious lack of tents in the medical department, Guild strongly urged that a system of railroad transportation for the wounded be immediately worked out, and the wounded conveyed to Richmond.[84] In January 1863 with General Lee's approval he forwarded to headquarters a draft of regulations designed to improve the efficiency of the medical department in the field.[85] In June 1863 he gave orders for the establishment of receiving hospitals on the Orange and Alexandria Railroad, preparatory to the Gettysburg Campaign.[86] After the battle of Gettysburg he reported the loss of one of two ambulance trains, which were attacked by a body of the enemy's cavalry. "The poor wounded suffered very much indeed by their rapid removal day and night, over rough roads, through mountain passes and across streams, toward the Potomac."[87]

The work of another medical director met with the approval of his commanding general. On April 9, 1862, after the battle of Kernstown, General Jackson reported that "Dr. Hunter McGuire, medical director, discharged his duties in a manner which proved him admirably qualified for his position."[88]

McGuire, with Jackson's approval, was responsible for an innovation in military practice. After the defeat of General Banks at Winchester in 1862, McGuire gave unconditional parole to eight United States army surgeons found attending Federal soldiers in the hospital there. The surgeons promised to attempt to institute the same practice in the Federal army. This policy was continued by McGuire and other Confederate officers. At the second battle of Manassas General Lee, adopting the same humanitarian principle, ordered his medical director, Lafayette Guild, to parole the Federal wounded and to allow them to be transported to Washington by the Federal Surgeon General, Ham-

[82] War of the Rebellion, Official Records, series 1, v. 11, part 3, p. 633.
[83] War of the Rebellion, Official Records, series 1, v. 19, part 2, p. 615.
[84] War of the Rebellion, Official Records, series 1, v. 21, p. 557.
[85] War of the Rebellion, Official Records, series 1, v. 21, p. 1082.
[86] War of the Rebellion, Official Records, series 1, v. 27, part 3, p. 863.
[87] War of the Rebellion, Official Records, series 1, v. 27, part 2, p. 326.
[88] War of the Rebellion, Official Records, series 1, v. 12, part 1, p. 383.

mond, all captured Federal surgeons to be recognized as noncombatants and to be released. Prior to this time medical officers, like other officers, had been held as prisoners of war. Although M. Jean Henri Dunant, who first suggested the Red Cross Society, had urged in 1859 that medical staffs of armies be declared neutral, this was the first application of that principle.[39]

After the second battle of Manassas, fought on August 30, 1862, General Stuart reported: "My division surgeon, Talcott Eliason, besides being an adept in his profession, exhibited on this as on former occasions, the attributes of a cavalry commander."[40]

A glimpse of the Confederate naval surgeon is found in the report of Franklin Buchanan, Flag Officer, C. S. N., March 27, 1862, writing from "Naval Hospital, Norfolk," and giving an account of the battle of the *Merrimac* and the *Monitor:* "Surgeon Phillips and Assistant Surgeon Garnett were prompt and attentive...Their kind and considerate care of the wounded and the skill and ability displayed...justly entitle them to the confidence of officers and crew...Dr. Garnett...stands deservedly high in his profession, is at the head of the list of assistant Surgeons,"[41] and is recommended for promotion.

The medical department of the Confederacy was never supplied with proper ambulances. The more comfortable vehicles were of Northern origin, coming into Confederate hands only with other spoils of battle. It is true that early in the war spring vehicles were supplied to some extent, but hard usage and rough roads soon caused the substitution of ordinary wagons without springs. They were usually drawn by two mules, and white oak boughs secured to the sides of the body supported the heavy cotton duck cloth upon which the name of the regiment, brigade, and division was painted. William H. Taylor describes them as "very sad-looking and, for the most part, very uncomfortable vehicles, and their unfortunate passengers were apt to have a dreary ride of it."[42] Charles Bell Gibson wrote Surgeon J. H. Claiborne in Norfolk, May 22, 1861, "We have no two-wheeled ambulances and only six four-wheeled ambulances so far ready for the whole army of Virginia...We have no transport carts at all."[43]

After the Seven Days' Battle, Medical Director Lafayette Guild declared that the "present impromptu ambulance system of this army requires radical changes."[44] On October 9, 1862 he appealed to the surgeon general for fifty

[39] Southern Historical Society Papers, v. 30, p. 226. Southern Practitioner, v. 28, p. 476.
[40] War of the Rebellion, Official Records, series 1, v. 12, part 2, p. 738.
[41] War of the Rebellion, Official Records, series 1, v. 9, p. 11.
[42] Taylor: De Quibus, p. 302.
[43] MS. in possession of Miss Lucy A. McIlwaine of Petersburg.
[44] War of the Rebellion, Official Records, series 1, v. 11, part 2, p. 501.

more ambulance wagons to move 5,000 sick and wounded from Winchester to Staunton. In December he wrote the surgeon general during the battle of Fredericksburg, referring to a volunteer ambulance corps from Richmond and pointing out the need for railroad transportation for the wounded. Preparing for the Gettysburg campaign, he asked for ambulance trains on the Central and Orange Roads, with medical officers, nurses, and other conveniences for the sick, to convey them to general hospitals.

The Richmond Ambulance Corps, a volunteer organization of about fifty citizens exempt from military duty, was active in many of the major battles in Virginia. John Dooley was captain, Philip J. Wright first lieutenant, John J. Wilson second lieutenant, and the corps included five doctors. After the battle of Chancellorsville General Lee wrote the chairman of this organization in Richmond, thanking the members for their past services and stating that limited transportation made it inadvisable for the committee to accompany the army in the movements of the Gettysburg campaign. They could best help the wounded by continuing "the same services which they have hitherto performed; to give them their tender care in their transportation to the hospitals; to furnish them with such supplies as will alleviate their painful journey..."[46]

Hostilities had hardly begun before the Southern surgeon realized that one of his great problems was to be the scarcity of drugs of all descriptions.[46] As the war wore on the situation became worse. The need for morphine, chloroform, ether, quinine, and alcohol became acute. In the budget of the surgeon general for 1865 it was estimated that 624,000 gallons of alcoholic stimulants, at a cost of $8,000,000, would be needed by the medical department that year.[47] Invoices in Richmond in June 1863 show the high price of drugs: sodium bicarbonate sold for $2.75 a pound, camphor for $20 a pound, quinine for $22.25 an ounce, morphine for $28 a dram, and French brandy for $52 a gallon.[48]

Attempts were made at drug manufacture in Richmond and other Southern cities. Supplies were sometimes captured from the enemy, but the most dependable source was the blockade runner. An agency was maintained in London with instructions to send in supplies by blockade runners in exchange for cotton. Quinine, morphine, and chloroform were the chief articles brought in. Many petticoats, quilted in secret in Northern cities, are said to have been worn

[46] War of the Rebellion, Official Records, series 1, v. 27 part 3, p. 873. Southern Historical Society Papers, v. 25, p. 113.
[46] Surgical instruments and drugs were early made contraband of war by the Federal government.
[47] War of the Rebellion, Official Records, series 4, v. 3, p. 1111.
[48] Southern Historical Society Papers, v. 33, p. 161.

through the lines by Southern ladies to yield later a supply of quinine and morphia. As blockade running became more difficult, the South was forced to turn to its indigenous medical plants. *Resources of Southern Fields and Forests,* by Francis P. Porcher of Charleston, a Confederate surgeon, was widely distributed. The government issued pamphlets, urging the collection of native botanical remedies, and Southern women were encouraged to cultivate poppies on a large scale. Surgeon General Moore constantly kept before his medical officers the need of utilizing native plants, ordering the hospital surgeons to have attendants and convalescents gather them and requesting reports on the amounts collected. "With the ample supply of indigenous remedial agents...in the vicinity of every camp...it is considered an injustice...that medical officers should complain of a want of means for treating the sick," he wrote in 1862.[49]

Many substitutes became popular in the South. Quinine was often replaced by cotton-seed tea, thoroughwort, and willow bark; digitalis by bloodroot and wild cherry; opium by American hemlock; flaxseed by watermelon seed; ipecac by wild jalap; senna by wild senna; olive oil by peanut oil and cotton seed oil; laudanum by hops and motherwort; acacia by slippery elm bark and sassafras pith; calomel by dandelion; belladonna by Jamestown weed; valerian by lady's slipper; and colchicum by Indian poke.[50] Diarrhœas and dysenteries were treated with blackberry root and sweet-gum bark; constipation with wild jalap; holly bark was used as a tonic, dogwood bark for malaria, willow bark for fever, watermelon and pumpkin seed as diuretics.[51]

II. SURGERY IN THE ARMY

While the immediate care of the wounded was the problem of the battlefield and the regimental surgeons, the seriously wounded who survived ultimately found their way to the general hospitals. In Virginia alone there were more than 194,000 wounded during the course of the war.

Surgical practice in the Civil War is well set forth in a *Manual of Military Surgery, prepared for the use of the Confederate States Army, by order of the Surgeon General,* published in 1863. Gunshot wounds of the abdomen and chest constituted about nineteen per cent of war wounds; those of the abdomen, particularly those penetrating a viscus, were regarded as almost certainly fatal. Except when it was necessary to return protruding viscera, no operations were attempted. It was believed that when this important cavity was once pene-

[49] War of the Rebellion, Official Records, series 4, v. 2, p. 13.
[50] Southern Historical Society Papers, v. 33, p. 161.
[51] Porcher: Resources of the Southern Fields and Forests, pp. 8, 9, 10.

trated death was the almost inevitable result, and the surgeon could do "little more than to sooth and relieve the patient by the administration of opiates." Wounds of the chest were regarded as hardly less serious. Hemorrhage and infection were recognized as the chief causes of death. "Hemorrhage from vessels belonging to the costal parieties should be arrested by ligation," hemorrhage from the lining itself by opium, quiet, cold applications and, "if the patient be sufficiently strong, bleeding from a large vein until *syncope* intervenes."[52] Surgery was advised "to remove splinters of bone, and re-adjust indented portions of the ribs... A pledget of lint should be laid on the wound, and a broad bandage placed around the chest... If the presence of a ball within the cavity be ascertained, effort should be made for its removal," though caution was admonished.

Wounds of the face, head, and neck constituted about twelve per cent of the total. Trephining was resorted to "only when there was reason for concluding that depressed bone was leading to *permanent* interruption of cerebral function, or that an abscess had formed within reach, and was capable of evacuation."[53] Gunshot wounds of the extremities constituted about sixty-five per cent of all wounds. They afforded the chief field for surgical intervention. First-aid was naturally given upon the field of battle, in the form of lint to wounds, protection against dust, support to fractures, the tourniquet or ligature for hemorrhage, and aromatic ammonia for shock. At the regimental or general hospitals wounds were more carefully examined, foreign bodies probed for and removed, splints readjusted, and fresh dressings applied. Dressings for the most part consisted of lint kept wet by water dripping from a can, at first cold, later hot. They were often covered with oiled silk. Ice was employed in the early stages, but when laudable pus appeared warm applications were favored. Sometimes creosote or some other "disinfecting fluid" was laid over the wounds to keep the flies away. Bleeding, once freely practised even on soldiers who were suffering from hemorrhage, was for the most part discountenanced, and besides the administration of a simple tonic of the perchloride of lime little else was done unless the dreaded secondary complications arose.[54] Chief of these complications was hemorrhage, "the terror of the surgeon as well as the patient." Should digital pressure, styptics, and the administration of opium—usually in the form of laudanum (twenty to sixty drops every two to six hours)—fail, ligation was

[52] Manual of Military Surgery, pp. 58, 63. Modern surgery has learned that mortality from abdominal wounds, due chiefly to hemorrhage and peritonitis, can be markedly reduced by prompt operative interference.
[53] Manual of Military Surgery, p. 53.
[54] Manual of Military Surgery, pp. 37-49.

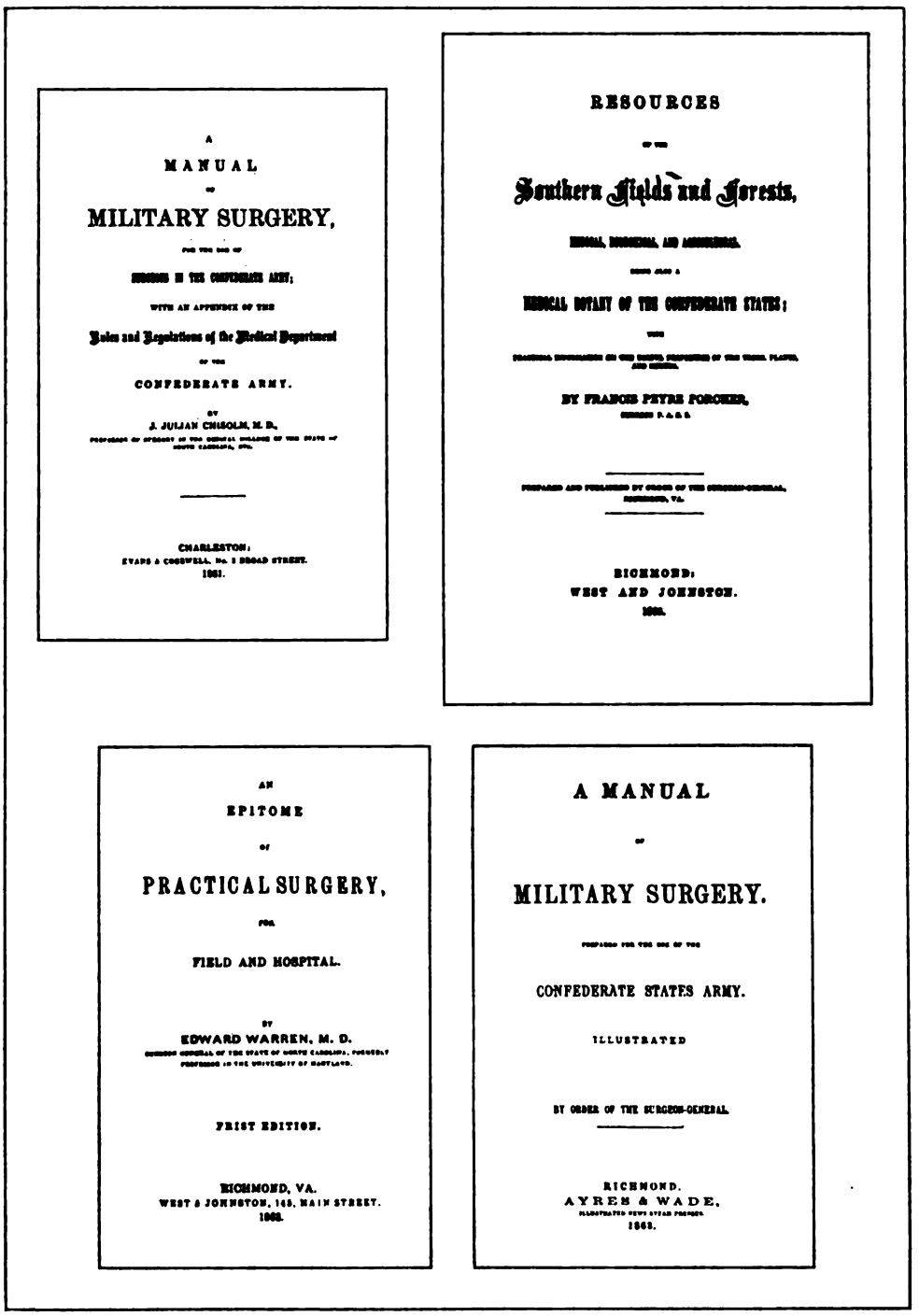
resorted to. For this purpose the surgeons of the Confederate States army used material known as saddlers' silk, or, occasionally, cotton threads twisted to the proper size.[55] There was much discussion of the relative value of the methods of Mr. Hunter and Mr. Guthrie, but as a usual thing the vessel was tied distally as well as proximally to the point of injury. "After the battle of Seven Pines, May 31, 1862, many of the wounded in the General Hospital at this place suffered from the most violent and incontrollable inflammation." An effort was made "to cure the inflammation in the limb by cutting off its arterial supply, by ligation of the main trunk which supported that inflammation."[56]

Another important surgical procedure was amputation. The extent to which this mutilating operation was resorted to is appalling. It was early a surgical dictum that practically all gunshot wounds of the femur and penetrating wounds of the joints were fatal and that immediate amputation offered the only opportunity for recovery. On the battlefield and in the regimental hospital this major procedure was one of the commonest operations encountered. During the battles around Richmond in the summer of 1862 there were performed in Richmond hospitals 132 amputations of the leg with a mortality of forty-three per cent, 172 of the thigh with a mortality of fifty-nine per cent, forty-five of the forearm with a mortality of thirteen per cent, 192 of the arm with a mortality of twenty-eight per cent. During this same period there were seventeen resections of joints with a mortality of thirty-five per cent, and seventeen ligations with a mortality of sixty-four per cent. From May to October 1862 there were 201 cases of gunshot wound of the thigh with compound fracture treated without amputation. The mortality was sixty per cent. An observer commenting upon these figures remarked that "this calculation is based upon the reports from the Richmond Hospitals, and gives far more favorable results than have been obtained elsewhere. It is probable that multitudes of unfavorable cases which died early, are not embraced in this table."[57]

Chloroform was the anæsthetic of choice in the Southern army, while ether was favored in the Northern. This partiality continued, at least in Virginia, for a long time after the war, and was the subject of some bitter controversy. One suspects it was largely the reflection of old animosities taking a remote way of expressing themselves.

Although there were thirty-seven deaths from chloroform and three from ether reported for the whole period of the war on the Northern side, Southern

[55] Manual of Military Surgery, p. 109.
[56] Manual of Military Surgery, pp. 102-103.
[57] Warren: Epitome of Practical Surgery for Field and Hospital, pp. 394-401.



A
MANUAL
OF
MILITARY SURGERY,
FOR THE USE OF
SURGEONS IN THE CONFEDERATE ARMY;
WITH AN APPENDIX OF THE
Rules and Regulations of the Medical Department
OF THE
CONFEDERATE ARMY.
BY
J. JULIAN CHISOLM, M. D.,
PROFESSOR OF SURGERY IN THE MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA, ETC.
CHARLESTON:
EVANS & COGSWELL, No. 3 BROAD STREET.
1861.

RESOURCES
OF THE
Southern Fields and Forests,
MEDICAL, ECONOMICAL, AND AGRICULTURAL.
BEING ALSO A
MEDICAL BOTANY OF THE CONFEDERATE STATES;
WITH
PRACTICAL OBSERVATIONS ON THE DISEASES, PECULIARITIES OF THE SOIL, CLIMATE, AND SEASONS.
BY FRANCIS PEYRE PORCHER,
SURGEON P. A. C. S.
PREPARED AND PUBLISHED BY ORDER OF THE SURGEON-GENERAL,
RICHMOND, VA.
RICHMOND:
WEST AND JOHNSTON.
1863.

AN
EPITOME
OF
PRACTICAL SURGERY,
FOR
FIELD AND HOSPITAL.
BY
EDWARD WARREN, M. D.
SURGEON GENERAL OF THE STATE OF SOUTH CAROLINA, FORMERLY PROFESSOR IN THE UNIVERSITY OF MARYLAND.
FIRST EDITION.
RICHMOND, VA.
WEST & JOHNSTON, 145, MAIN STREET.
1862.

A MANUAL
OF
MILITARY SURGERY.
PREPARED FOR THE USE OF THE
CONFEDERATE STATES ARMY.
ILLUSTRATED
BY ORDER OF THE SURGEON-GENERAL.
RICHMOND.
AYRES & WADE,
ILLUSTRATED NEWS STEAM PRINTERS.
1863.

Title pages of Confederate medical manuals.

surgeons claimed that there was no danger in anæsthesia properly given. Hunter McGuire declared that "in the corps to which I was attached, chloroform was given over 28,000 times, and no death was ever ascribed to its use."[58] A rebel surgeon, F. E. Daniel, wrote: "We were short on chloroform, and had to use it as economically as possible...Some that we used I know was adulterated...I administered chloroform and had it administered for me many scores of times...and I never had a serious accident—never a death from chloroform."[59]

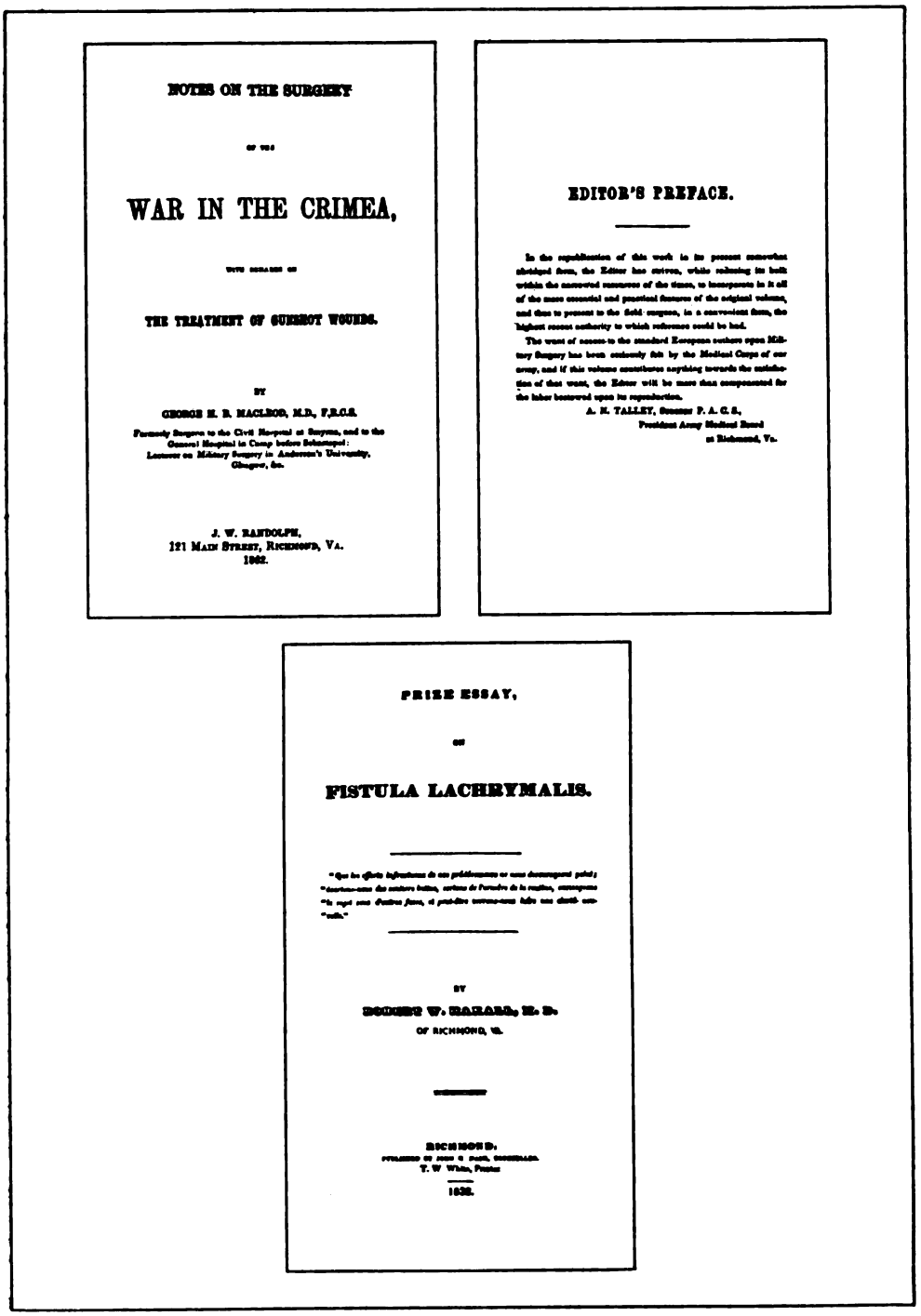
The chloroform employed in the Southern army had to come through the blockade and was accordingly difficult to procure. It was often adulterated, and there were certainly some deaths from its use. As a matter of fact, one of the questionnaires sent out by the surgeon general between 1863 and 1864 was concerned with chloroform mortality. It was also one of the topics discussed at a meeting of the Association of Army and Navy Surgeons of the Confederate States.

Surgical instruments were at a premium in the South. Surgeon F. E. Daniel "once performed an amputation with a pocket knife and common saw. But for the most part the Confederate surgeons had instruments, such as they were."[60] There were dealers in surgical instruments in the larger Southern cities at the beginning of the war. Their supply, shortly exhausted, was added to by blockade runners and the handiwork of the few skilled artisans in the South. Many of the instruments used by the Southern surgeon were his private property, many had been captured from the enemy, and many were crude improvisations.[61]

Bandages were made from osnaburg, and few Southern manufacturers produced it. Lint was generally made from old sheets and clothes, the women doing the necessary scraping. Raw cotton, carded by hand and baked in an oven, was used as a substitute. Cotton rags were employed for sponges. Adhesive plaster and starch bandages were popular. Ligatures and sutures were usually made of cotton, flax, or horsehair. Silk was extremely scarce.

The war found the South without technical works on military medicine. It was declared that "no work on military surgery could be purchased in the Confederate States." The emergency was quickly met. In 1861 there appeared *A*

[58] McGuire: Progress of Medicine in the South, Southern Historical Society Papers, v. 17, p. 3.
[59] Daniel: Recollections of a Rebel Surgeon, p. 206 ff.
[60] Daniel: Recollections of a Rebel Surgeon, p. 206.
[61] The surgical cases, with the instruments, of Surgeons T. W. Gordon, Henry Caperton, John Seabrook, James Bolton and Dr. Slater present an interesting display in the Confederate Museum. Surgeon John Spotswood Wellford's instruments are preserved in the Library of the Richmond Academy of Medicine.



NOTES ON THE SURGERY

OF THE

WAR IN THE CRIMEA,

WITH REMARKS ON

THE TREATMENT OF GUNSHOT WOUNDS.

BY

GEORGE H. B. MACLEOD, M.D., F.R.C.S.

Formerly Surgeon to the Civil Hospital at Smyrna, and to the General Hospital in Camp before Sebastopol: Lecturer on Military Surgery in Anderson's University, Glasgow, &c.

J. W. RANDOLPH,
121 Main Street, Richmond, Va.
1862.

EDITOR'S PREFACE.

In the republication of this work in its present somewhat abridged form, the Editor has striven, while reducing its bulk within the narrowed resources of the times, to incorporate in it all of the more essential and practical features of the original volume, and thus to present to the field surgeon, in a convenient form, the highest recent authority to which reference could be had.

The want of access to the standard European authors upon Military Surgery has been evidently felt by the Medical Corps of our army, and if this volume contributes anything towards the satisfaction of that want, the Editor will be more than compensated for the labor bestowed upon its reproduction.

A. H. TALLEY, Surgeon P. A. C. S.,
President Army Medical Board
at Richmond, Va.

PRIZE ESSAY,

ON

FISTULA LACHRYMALIS.

BY

GEORGE W. HARRIS, M. D.
OF RICHMOND, VA.

RICHMOND:
T. W. White, Printer
1838.

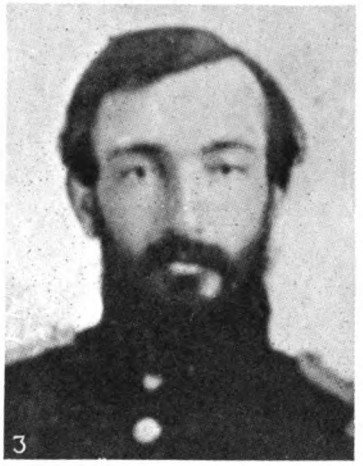
Title page of a Confederate medical manual with the editor's preface.
Title page of a prize essay.

Manual of Military Surgery for the Use of Surgeons in the Confederate Army, by J. Julian Chisholm; in 1862 Macleod's *Notes on the Surgery of the War In the Crimea,* edited by A. N. Talley, president of the Confederate Army Medical Board, and published in Richmond by J. W. Randolph; in 1863, *An Epitome of Practical Surgery, for Field and Hospital,* by Edward Warren, published in Richmond by West and Johnston; *A Manual of Military Surgery,* prepared by order of the Surgeon General and published in Richmond by Ayres and Wade in 1863; and *Resources of the Southern Fields and Forests,* by Francis P. Porcher, published in Richmond and Charleston in 1863. Although a few medical officers brought their own textbooks with them—perhaps an anatomy, a surgery, or a work on medicine—most of them had to depend on these manuals. On the whole they contained a great deal of useful information, especially about such diseases as shock, tetanus, erysipelas, pyemia and hospital gangrene; gunshot wounds, hemorrhage, fractures, and the technique of resection, amputation and ligation. Porcher's book described the most easily procurable medicinal plants of the South with their therapeutic uses. With such help, details from companies could be sent into the woods for fresh supplies for the surgeon.

The surgical diseases—hospital gangrene, tetanus, erysipelas, and septicemia —were principally responsible for the delayed mortality among the wounded in the general hospitals. Hospital gangrene occurred most often in the lower extremities, with acute pain, cold sweats, characteristic changes in the affected limb, and death within fourteen to sixteen hours. The suffering of the patient and the nauseous putridity of his disease gave a horrible aspect to this dreaded complication. To prevent it the Southern surgeon was told to avoid overcrowding patients, to practise cleanliness, to construct latrines over running water, and to dress the wounded frequently and carefully. When the disease made its appearance, "nothing short of complete segregation of each case, as it occurs, with a liberal use of disinfectants, can give a promise of security against its further spread."[62]

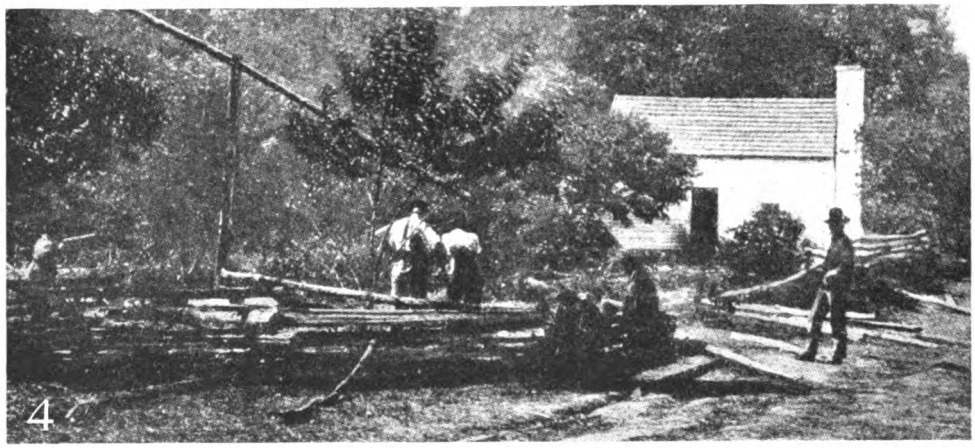
Previous military experience warned of the danger of tetanus, which was classified as traumatic when it followed in the wake of wounds of all descriptions and ideopathic when it was "supposed to depend upon exposure to cold and damp, intestinal irritation, intense mental excitement" and other vague causes.[63] Although a Southern surgeon wrote: "the experience of the war in which we are now engaged... proves that in this climate, at least, the complication is rare," we find the Association of Army and Navy Surgeons of the Con-

[62] A Manual of Military Surgery, 1863, p. 32.
[63] Manual of Military Surgery, 1863, p. 10



MEDICAL OFFICERS, CONFEDERATE STATES ARMY

1. Samuel Brown Morrison. 2. Thomas H. Williams 3. Lafayette Guild.
4. Captain Sally Tompkins. 5. J. S. D. Cullen.



1. The Chimborazo Hospital. 2. General Hospital No. 1, the Richmond City Almshouse. 3. A Confederate Hospital on the Firing Line, Petersburg, Va. 4. A Confederate Field Hospital, Cedar Mountain.

federate States, on February 13, 1864, for a second time considering a report of the disease, this time of twenty-six cases.

Erysipelas was regarded as a constitutional disease with local manifestations, to which the patient was predisposed by dampness, intemperance, bad diet, and the like. Its epidemic tendency was recognized and, in a manner highly satisfactory to the medical understanding of that day, attributed to meteorological changes.[64] There were 390 cases in the Army of the Potomac (later the Army of Northern Virginia) between July 1861 and March 1862—an annual rate of 10.5 cases per thousand. In Chimborazo Hospital there were twenty-two deaths among 236 cases.[65] In January 1864 Surgeon William A. Carrington reported 1,386 cases, with 108 deaths, treated in the general hospitals of Virginia during the previous sixteen months.[66]

Septicemia likewise was believed to be influenced by "the epidemic constitution of the atmosphere" in concatenation with such exciting causes as wounds and injuries, especially of "the veins and bones." It was regarded as a terrible scourge, accounting for forty-three per cent of all primary amputations.[67]

Surgical practice in the Confederate army underwent considerable change during the course of the war. At its termination the conspicuous improvements that had taken place were the relinquishment of depleting therapy in gunshot wounds of the chest, a sounder practice in the management of wounds of the arteries, limitations assigned to special excisions, and a general tendency to greater conservatism.[68]

III. SICKNESS IN THE ARMY

As in most wars, sickness was far more disabling than wounds. In the Confederate Army of the Potomac (later called the Army of Northern Virginia) with an average strength of 49,394 there were 148,149 cases of sickness during the nine months from July 1861 to March 1862, an equivalent of three illnesses for each man, or 3,019 per one thousand of mean strength. In the Union Army of the Potomac for the same nine months there were 2,136 cases of sickness per one thousand of mean strength. In a group of general hospitals in Virginia from September to December 1862, there were 48,544 admissions, of which 34,890 were for specific diseases. The large Chimborazo Hospital in

[64] Manual of Military Surgery, pp. 13-23.
[65] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, p. 663.
[66] Confederate States Medical and Surgical Journal, v. 1, No. 4, April, 1864.
[67] Manual of Military Surgery, pp. 24, 26.
[68] Medical and Surgical History of the War of the Rebellion, Surgical Volume, part 1, p. xxii.

Richmond admitted, during the course of the war, 77,889 patients. 50,350 were reported as having specific sicknesses.[69]

Among the disabling diseases of the Civil War, malaria ranks among the first. One-fourth of all the reported cases of disease in the Union armies were from this cause.[70] The disease was even more prevalent among Southern troops but less fatal than among Northern troops. The Army of the Valley of Virginia, with an average strength of 15,582 men during ten months, January 1862 to October 1862 inclusive, had 3,885 cases of malaria.[71]

Typhoid fever, though less frequent, was responsible for about one-fourth of all deaths from disease in the Confederate army. In the Confederate Army of the Potomac, with a mean strength of 49,394, between July 1, 1861 and March 31, 1862, there were 1,133 cases of so-called "continued fevers," a ratio per thousand of 22.9.[72] During the first year of the war the disease appeared to be not only more frequent but more fatal among the Confederates. This was due to an epidemic among the Virginia troops in the summer and fall of 1861. Later typhoid declined in both armies, and toward the end of the war almost disappeared from among the veteran troops. Among 2,153 febrile cases with known results treated in Chimborazo Hospital in Richmond there were 885 deaths, or forty-one per cent. In the general hospitals of Virginia outside of Richmond, between January 1862 and February 1863, there were 6,245 cases with 1,619 deaths. In the general hospital at Charlottesville between July 1861 and September 1863 there were 1,312 cases and 313 deaths.[73] When Surgeon Edward Warren arrived at this hospital for duty two weeks after the first battle of Manassas he found "scattered through hotels, private houses, public halls...more than twelve hundred cases of typho-malarial fever." He stated that "The Army was, literally, in a state of disorganization, in consequence of the immense number of its sick and wounded and because of the impotency of its medical organization."[74]

Pulmonary tuberculosis as a disabling disease was probably commoner than the records show. Only 189 cases were reported in Chimborazo Hospital. Fifty-

[69] Monthly returns of sick and wounded in the reports of certain general hospitals in Virginia, and Registers of the Chimborazo Hospital, Richmond. Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, p. 29.

[70] Between 1861 and 1866 there were 1,213,685 cases and 12,199 deaths in the Union Army from malaria. Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, p. 79.

[71] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, p. 105.

[72] The ratio in the opposing Union Army was 10.4.

[73] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, pp. 206-208. This does not include so-called typho-malarial fever, which was also prevalent but not so fatal.

[74] Warren: A Doctor's Experiences on Three Continents, p. 270.

two of these died.[75] Probably Surgeon Blackford's report from the general hospital at Liberty (now Bedford City) to Inspector General Cooper in Richmond, October 17, 1862, gives a fairer idea of the incidence of this disease. He lists nineteen soldiers discharged from the service at his hospital by the examining board—fourteen of whom were suffering from "phthisis pulmonalis."[76] There were 7,972 deaths from "pulmonary affections" in the Confederate forces up to December 31, 1862.

At least one epidemic of cerebrospinal fever was reported among troops in Virginia. It occurred near Richmond in 1864 and was described by Surgeon R. P. Vest.[77]

The eruptive fevers with high incidence and appreciable mortality showed serious outbreaks in both armies. Smallpox at first did not appear in the Confederate Army of the Potomac, although by March 1862 on the Union side there were 380 cases; but after the Maryland campaign of the summer of 1862 the disease invaded Virginia. Medical Director Carrington of the Department of Virginia reported in the hospitals under his charge, between October 1862 and January 1864, 2,513 cases of smallpox with 1,020 deaths. There were also 1,196 cases of varioloid with thirty-nine deaths. Carrington says that "soldiers from the Army of Northern Virginia had brought the disease [smallpox] to the hospitals, and being unconscious and unsuspected, had exposed many to it, before the diagnosis was made."[78]

Lafayette Guild, reporting the exceptional good health of the Army of Northern Virginia in January 1863 after the battle of Fredericksburg, added in a letter to Surgeon General Moore: "At present there are about 60 cases of variola and varioloid in this army." He complained that the only cases in the army in the field were brought there by soldiers dismissed from general hospitals where the disease was prevalent, and asked that they be retained in the hospitals long enough to insure immunity from the contagion.[79] A general vaccination was ordered, and a number of cases of spurious vaccinia followed.[80] At the time of the battle of Chancellorsville there were said to be 5,000 men unfit for duty on account of disability arising from vaccination.[81] At the meeting of the Association of the Army and Navy Surgeons of the Confederate States, February 27, 1864, a committee was appointed to investigate and report

[75] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, pp. 30, 31.
[76] Freeman: Calendar of Confederate Papers, p. 15 ff.
[77] Richmond Medical Journal, 1866, v. 1, p. 314.
[78] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, p. 628.
[79] War of the Rebellion, Official Records, series 1, v. 21, p. 1082.
[80] Jones, Joseph: Researches upon Spurious Vaccination, 1867.
[81] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, p. 638.

on "syphilitic inoculation, its relation to vaccination."[82] Untoward results from vaccination seem to have been the rule in the Confederate army, and long afterwards popular antagonism to this procedure lingered in the minds of Southern people.

In January 1863 Surgeon Blackford, of the General Hospital at Liberty, was forced to erect a separate building for smallpox patients. Everyone in the vicinity was ordered vaccinated. Blackford's correspondence with the surgeon general shows the difficulty of securing an adequate supply of reliable virus.[83] On February 19, 1862 the medical director informed Surgeon Blackford from Manassas Junction that in establishing a general system of vaccination it was desired to accompany the official forms with notes so arranged that further information might be gathered. A medical officer would be assigned to the special duty of vaccinating new patients, and the importance of procuring the facts should be impressed upon him. "Crusts of an unexceptional character procured from patients without constitutional disease, and never before vaccinated, will be preserved, and if not needed for use in the Hospital under your charge, will be forwarded, properly labelled, to this office."

Measles played havoc with many regiments of the Confederate service, especially those with recently enlisted men from the country. The Confederate Army of the Potomac during the summer of 1861 had 8,617 men down with this disease, one out of every seven in the command.[84] In the peninsula that summer measles was particularly prevalent.[85] Scarlet fever was rarely seen during the war. Mumps was prevalent only during the first year.

At one time Guild reported a tendency to scorbutus throughout the whole army, and requested an increase in the vegetable ration. "Vinegar and potatoes are absolutely necessary for the maintenance of the health of the troops... our next campaign may be a disastrous one, simply for want of antiscorbutics,"[86] he wrote. In April 1863 the surgeon general sent a circular to all medical directors concerning the prevention and cure of scurvy, directing that medical officers collect supplies of all native edible plants in the vicinity of camps—wild mustard, water cress, wild garlic, sassafras, sorrell, artichoke, and garden parsley. "Medical officers in charge of hospitals will be instructed to furnish the sick with as liberal an allowance of succulent vegetables as their condition and the state of the hospital fund will allow."[87] At the Chimborazo Hospital

[82] Freeman: Calendar of Confederate Papers, p. 33 ff.
[83] Freeman: Calendar of Confederate Papers, p. 15 ff.
[84] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, p. 649.
[85] War of the Rebellion, Official Records, series 4, v. 1, p. 883.
[86] War of the Rebellion, Official Records, series 1, v. 21, p. 1082.
[87] War of the Rebellion, Official Records, series 4, v. 2, p. 467.

there were 119 cases of scurvy with eight deaths, and in the Robertson Hospital there were six deaths.

The respiratory diseases were of frequent occurrence in the Confederate army, influenced by the scarcity of clothing, blankets, and shelter tents, and the greater susceptibility of Southern troops campaigning in Northern climates. In the Army of the Valley of Virginia during ten months, January to October 1862, there were 1,034 cases of pneumonia. In the Chimborazo Hospital during the war there were 1,099 cases of bronchitis and catarrh with eighty-nine deaths and 1,568 cases of pneumonia and pleurisy with 583 deaths.[88]

In order to keep further abreast of the times and to disseminate information concerning military medicine the *Confederate States Medical and Surgical Journal* was published in Richmond. It ran for a little over a year (thirteen issues),[89] and was the organ of the Association of the Army and Navy Surgeons of the Confederate States, an organization composed of the staff of the surgeon general's office and the surgeons of the forty-four hospitals around Richmond. The Association met in the building of the Medical College of Virginia off and on from August 22, 1863 until March 18, 1865. It was organized into medical and surgical sections under the presidency of Surgeon General S. P. Moore, with W. A. Davis and W. A. Thom as secretaries. During its existence it formulated and sent out to the surgeons in the field several important questionnaires. One dealt with the point of entrance and exit of gunshot wounds, another with chloroform, shock, and cicatrices, another with primary and secondary hemorrhages, another with traumatic aneurisms, another with tetanus and nerve injuries. The papers and discussions of the Association dealt with the same or related subjects.

An account of the sanitation of the Confederate States army in Virginia has been left us by Surgeon Bedford Brown.[90] From it we learn that the army was healthiest when on the march and that disease was to be expected when it was encamped. Jackson's army, called upon for the most strenuous military duty, was the healthiest in the service. General Lee had 4,000 cases of typhoid, dysentery and pneumonia, with high mortality, in an army of about 17,000 while encamped in the Alleghany Mountains in the autumn of 1861, due to ignorance of the fact that even pure-looking mountain water was unfit for drinking purposes when contaminated by human excreta.

[88] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 3, pp. 30, 721.
[89] There are few complete files in existence. One is in the library of the surgeon general and another is owned by Dr. J. McCaw Tompkins of Richmond.
[90] Virginia Medical Monthly, 1893-'94, v. 20, p. 589.

Surgeon Brown pointed out that he had been able to control the health of the troops under his charge by insisting upon extreme cleanliness, daily police of the camps, striking tents and exposing the ground to the rays of the sun, constructing proper latrines below the level of the water supply and making their use compulsory. It was not at that time so well known that diet influenced the health of armies. Experience taught how costly dietary errors were. The soldiers got little meat and few vegetables. New recruits burned their bread, fried their food saturated with grease, and suffered with indigestion, colic, and diarrhœa. Not until the Confederate soldier substituted the stewpan for the frying pan in preparing his food did his health improve. In a few months in a single camp Brown saw 4,000 cases of measles develop among 10,000 recruits. If these convalescent patients were kept in camp or sent forward into the line they almost invariably developed fatal sequelae. "The diseases consequent to and traceable to measles cost the Confederate Army the lives of more men and a greater amount of invalidism than all other causes combined... Occupying only a secondary place to measles, diarrhœa was the bane of the volunteer recruit of the Confederate Army. Nine-tenths of all new recruits suffered from an attack of diarrhœa."[91]

The Confederate Army of the Potomac, with an average mean strength of 49,394 for the nine months between July 1861 and March 1862, showed 36,572 cases of diarrhœa and dysentery. The greatest number occurred during July and August.[92] From September to December 1862 there were in the general hospitals of Petersburg, Danville, Lynchburg, Farmville, Charlottesville, Staunton, Gordonsville, Culpeper Court House, and Warrenton 2,855 cases of acute and 2,258 cases of chronic diarrhœa and dysentery.[93] In the Chimborazo Hospital in Richmond there were 10,503 admissions for dysentery and diarrhœa during the course of the war. The death rate among them was ten per cent. The register of the Robertson Hospital in Richmond, out of a total of 1,334 patients, showed 137 cases of diarrhœa and dysentery.[94] Joseph Jones, a surgeon in the Confederate service, wrote: "Chronic diarrhœa and dysentery were the most abundant and most difficult to cure among army diseases; and whilst the more fatal diseases, as typhoid fever, progressively diminished, chronic diarrhœa and dysentery progressively increased, and not only destroyed more soldiers than gunshot wounds, but more soldiers were permanently dis-

[91] Virginia Medical Monthly, 1893-'94, v. 20, pp. 590-599.
[92] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 2, p. 26.
[93] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 2, p. 27.
[94] MS. in the Confederate Museum, Richmond.

abled and lost to the service from these diseases than from the disability following accidents of battle."[95]

There were other disabling diseases of the war. There were 1,984 cases of rheumatism in the Chimborazo Hospital with eighty deaths, and in the Robertson Hospital forty-five cases of rheumatism with two deaths. Prevalent also in the army were venereal disease and the army itch. A curious complaint was described among soldiers of the Army of Northern Virginia during the period of the occupation of Fredericksburg. It was a form of night blindness. Soldiers who had been on the march all day complained at nightfall of inability to see and had to take the arm of a comrade in order to continue marching. There were no constitutional symptoms, and the eyes appeared normal except for a continued dilatation of the pupils even when exposed to the light of a candle. The disease, at first looked upon as a type of malingering, was later considered to be a manifestation of dietary deficiency and the depressing influence of campaigning under conditions of extreme hardship. Treatment seemed to be of little avail, although there were often spontaneous cures after treatment had been discontinued.[96]

BEHIND THE LINES

I. HOSPITALS

The war found the South utterly unprepared for the enormous task of hospitalizing the sick and wounded. At first the emergency was met largely by individual charity and enterprise. Private houses, public buildings, and warehouses were converted into temporary hospitals operated by volunteers, more or less loosely connected with the military organization. On September 16, 1861 Miss Jane Stanard of Richmond wrote that "the Ladies who have charge of the Fourth Street Hospital" yesterday unanimously resolved "that Doctors Wm. H. Gwathmey and Albert Wortham be requested to attend the hospital as Physicians." On April 4, 1862 Miss Stanard wrote extending the "heart-felt thanks" of the "Ladies of the Fourth Street Hospital" to Dr. Gwathmey for his faithful care of the sick. Miss Martha Morris was the matron, and the two doctors gave their services.[97]

The first year of the war the Confederate Congress appropriated $50,000 for hospital construction. During the last year the appropriation mounted to $200,000. In the meantime, with better organization and an understanding of

[95] Medical and Surgical History of the War of the Rebellion, Medical Volume, part 2, p. 31.
[96] Richmond Medical Journal, 1867, v. 3, p. 35.
[97] Miscellaneous Papers, Confederate Museum.

its vast problems, the medical department had taken over or closed all private hospitals, and all soldiers were under the care of military hospitals. In addition to the general hospitals usually located at important railway junctions well in the rear of the zone of the advance, Congress in 1863 made provision for "way hospitals." At suitable and convenient places along the railroad routes these hospitals were set up to furnish quarters and rations to the sick and wounded on furlough or returning home after discharge.[98]

The specific bills relating to hospitals which the Congress enacted provided that all surgeons should visit patients in the hospitals at least once a day, made it plain that directors of hospitals were not to be interfered with by medical directors of the army in the field, fixed the commutation value of rations for sick and disabled soldiers in hospitals at $1.00 a day—officers who were patients in the hospitals paid $1.00 a day—and provided that the accrued funds from this source (the hospital fund) should be held by the commissary until paid over to the surgeon in charge of the hospital. Provision was made for matrons, ward masters, and nurses. On September 27, 1862, in line with the policy of recognizing the rights and privileges of the individual states, it was determined to name the hospitals after the states, and it was directed that as far as practicable the sick and wounded be assigned to hospitals representing their own state.[99]

An investigating committee of the Congress on January 29, 1862 reported that it was "deeply impressed with the inadequacy of the preparations and provisions for...sick soldiers." Lack of hospitals near the armies in western Virginia and in the peninsula during the summer of 1861 was noted. The hospitals lacked medical supplies. The surgeons did not keep adequate lists of the sick and the dead. There was no nursing corps, and, due to the method of appointment, the medical staff was made up largely of young and inexperienced men. The committee suggested additions to the medical staff, increase in the number of inspectors, better transportation for the sick, improvement in food and cooking, and the establishment of a board of medical examiners and a corps of nurses.[100]

As the war wore on Confederate hospitals felt more and more the want of food, drugs, clothing, dressings, and the necessary personnel to care for the sick and police the hospitals. On September 23, 1864 it was reported to Inspector General Cooper that "Heth's division hospital, Dr. Hubbard in charge, was inspected...in company with Doctor Breckenridge, medical inspector of the army, Doctor Powell, medical director of the corps, and Major Wingate,

[98] Statutes at Large, Confederate Congress, p. 162.
[99] Statutes at Large, Confederate Congress, p. 63.
[100] War of the Rebellion, Official Records, series 4, p. 883.

assistant inspector general... [the] hospital [is] well located in a very beautiful grove near Petersburg... The police was very bad... no attention seemed to be paid to cleaning up the grounds... offensive to sight as well as to smell... In this important feature of cleanliness there was evident an inexcusable neglect in the management of this hospital... sickness of the division was on the decrease."[101] About the same time the medical director of the Army of the Potomac, Lieutenant Colonel T. A. McParlin, received from a Union Hospital, also located near Petersburg, a report which affords an interesting contrast: "Drugs and dressings in abundance, hospital stores, ice, and even delicacies were constantly issued; cooking stoves, cauldrons, and portable ovens were on hand... abundant supply of bedsteads." Waterworks had been established to pump water from the river, and sprinklers from the city of Washington were on hand to lay the dust of the roads.[102]

Early in 1864 the health of the Army of Northern Virginia was so excellent that many hospitals, especially those in Richmond, were temporarily closed.[103] General Lee's desire for further economies in man power, to be effected by the closing of still other hospitals and the consequent release of their attendants, called forth a sharp rejoinder from Surgeon General Moore on February 24, 1864. He assured the Secretary of War that General Lee was mistaken in thinking that able-bodied men were detailed as nurses in the hospitals, when as a matter of fact only disabled men, who were reëxamined monthly to determine their fitness for return to military duty, were so employed.[104] He called the Secretary's attention to the fact that General Lee's was not the only army in the field and that Longstreet's medical director had recently requested 10,000 beds. "Where are they to be had if the larger hospitals enumerated by General Lee are closed?" If in time of emergency hospital accommodation should be lacking, "on whom will the odium fall?" queried the surgeon general. "Not, surely on General Lee, but on the chiefs of the medical department. The want of hospitals was terribly felt in 1861, and I dare not assume the responsibility of having such scenes enacted over again."[105]

II. HOSPITALS IN THE CAPITAL

Richmond was the chief hospital center. Nowhere else did the Confederate government congregate so many sick and wounded. In the emergency, use was

[101] War of the Rebellion, Official Records, series 1, v. 42, part 2, p. 1274.
[102] War of the Rebellion, Official Records, series 1, v. 40, part 1, p. 269.
[103] Medical Director W. A. Carrington was directed by the surgeon general in January 1864 to close General Hospital No. 1, the Winder Hospital, and Howard's Grove Hospital.
[104] To these disabled and incompetent soldiers, Moore said, "the line officers invariably object as well as to negroes," who were generally used in the hospitals.
[105] War of the Rebellion, Official Records, series 1, v. 33, pp. 1196, 1197.

made of factories and warehouses, stores, hotels, and churches. This was especially true early in the war when so many of the casualties of battle were pouring into Richmond and regular hospitals had not been organized. Among the buildings used in this way were Liggon and Howard's Factory between Twenty-fifth and Twenty-sixth on Main; Crow's Factory on the corner of Cary and Twenty-first Streets; Kent, Paine & Company's on Main between Eleventh and Twelfth; Kean, Baldwin & Company's on Main Street between Eleventh and Twelfth; Mayo's and Dibrell's warehouses; the Danville workshops in Manchester; Bacon & Baskervill's on Cary Street between Thirteenth and Fourteenth; Bailey's Factory on Seventh Street between Main and Cary; Moore's Factory on Main Street between Twenty-fifth and Twenty-sixth; Gwathmey's on the corner of Cary and Twenty-fifth; St. Charles Hotel on the corner of Main and Wall Streets; the United States Hotel on the corner of Nineteenth and Main; Royster's Hospital on Twenty-fifth Street between Main and Franklin; the Banner Hospital on the corner of Franklin and Nineteenth; the Globe on Nineteenth Street between Main and Franklin; the Masonic Hall on Twenty-fifth Street, Church Hill; Breeden and Fox's Store, Broad Street, Shockoe Hill; the basement of the Spotswood Hotel; the basement of Centenary Church, and the Baptist Church on Fourth Street between Lee and Laurel. Other early hospitals were the South Carolina Hospital in Manchester, the Soldiers' Home at Clay and Henry Streets, and the Byrd Street Hospital near Ninth Street.[106] Most of these were closed by 1863.

One of the earliest and best of the Richmond hospitals was General Hospital No. 1, at the city almshouse, said to have been "the only building in Richmond adapted to hospital purposes." A large brick building capable of accommodating five hundred patients, it was in charge of Charles Bell Gibson. J. J. Simpkins was associated with him, with G. W. Carrington and John Leffers as assistant surgeons. "At that time [during the first months of the war] this hospital was the best in the Confederacy," wrote a Confederate surgeon. "Besides an excellent corps of surgeons, there were the gentle Catholic 'Sisters'... These were all from Baltimore, Md. and Emmettsburg, Pa."[107]

Surgeon General Moore wrote of the early organization of hospitals that after the first battle of Manassas (1861) the wounded Federal prisoners were cared for at the almshouse and the wounded Confederates "were treated in

[106] A Confederate Scrap-Book, p. 46.
[107] Southern Practitioner, v. 28, p. 476. Paper read at the ninth annual session, Association of Medical Officers of the Army and Navy of the Confederate States of America, by Dr. Newton of Georgia.

private houses, in small, unoccupied wooden buildings, and small tobacco-factories improvised as hospitals." This was unsatisfactory, and soon "the plan was adopted of erecting buildings, each one to be a ward and separate, of undressed planks set upright, calculated for thirty-two beds, with streets running each way...From fifteen to twenty of such wards constituted a division, three or more divisions making a general hospital...There were five of these hospitals in the suburbs of Richmond, erected in 1861...The plan proved to be excellent, and the temporary hospital buildings in the city were abandoned as soon as practicable, the larger factories only being retained and used."[108]

Chimborazo Hospital, the largest and most famous military hospital in this country,[109] was organized late in 1861, with James B. McCaw at its head. At the time of the first battle of Manassas General Joseph E. Johnston advised Surgeon General Moore that hospital beds for about 9,000 men would be needed in Richmond. A conference between the Surgeon General and Dr. McCaw led to the selection of Chimborazo Hill overlooking Richmond as a convenient and salubrious site. Two weeks later 6,000 soldiers had been admitted to a hastily constructed hospital here. As it finally appeared it was a cantonment consisting of 150 well-ventilated single-story wooden buildings, each one hundred feet long and thirty feet wide. It was organized into five divisions of thirty wards each, with a capacity of from forty to sixty beds to a ward. The buildings were separated by alleys and streets. Besides the wards there were a hundred "Sibley tents," each housing from eight to ten convalescents. A line officer and thirty enlisted men were attached to the hospital, which became a military post with Dr. McCaw as commandant. Each of the five divisions was in charge of a surgeon. In all there were about fifty assistant and acting surgeons. The First or Virginia Division was under Surgeon P. F. Brown of Accomac,[110] the Second or Georgia Division under Surgeon S. E. Habersham of Atlanta,[111] the Third or North Carolina Division under Surgeon E. Harvey Smith,[112] the Fourth or Alabama Division under Surgeon W. A. Davis,[113] and

[108] Photographic History of the Civil War, v. 7, p. 280.

[109] The next largest was the Lincoln Hospital in Washington, caring for 45,000 patients. Previous to this the Scutari Hospital in the Crimea with 35,000 patients had held the record for size.

[110] Early in 1864 the assistant surgeons were J. C. Watson, John Minge, John C. Baylor, J. P. Harrison; acting assistants, J. R. Gildersleeve, J. G. Seabrook. (Roster of General Hospitals, MS. in the Confederate Museum.)

[111] Assistant surgeons early in 1864: J. C. Vaiden, E. W. Gordon and E. J. Harrison; acting assistants, J. O. Dickert and H. D. Bright.

[112] Assistant surgeons early in 1864: W. A. Washington, G. W. Carlton, E. C. Epes, and J. H. Gaskins; acting assistants, J. W. Bowen and J. P. Tabb.

[113] Assisted early in 1864 by surgeon, B. C. Craig; assistant surgeons, F. B. Shuford, J. B. Wiley, W. C. Kloman and W. D. Chapman.

the Fifth or South Carolina Division under Surgeon E. M. Seabrook of Charleston.[114]

Mrs. Minge, wife of Dr. Minge, was the chief matron, and Miss Mary Pettigrew, sister of General Pettigrew, a young woman twenty years of age, was chief matron of the Virginia Division. There were forty-five matrons in all. Jett T. West and one Susdorff of North Carolina were the apothecaries. The hospital was supplied with good water and had five large ice houses, a Russian bathhouse and an excellent system of sewage disposal. The near-by tobacco factories were converted into soup houses, and their hands were employed to make furniture for the hospital. There were also a bakery and a brewery. Mr. Franklin Stearns loaned to the hospital his near-by farm, "Tree Hill," to pasture the cows and goats which supplied important dairy products. A trading boat, the *Chimborazo,* plied the James River and Kanawha Canal between Richmond, Lynchburg, and Lexington, bartering cotton, shoes, and yarn for provisions. The hospital was self-supporting. The only money it received from the Confederate government came from commutation of rations. During the period of the war over 77,000 patients were cared for. Of these 7,000 died.[115]

There were many other hospitals in Richmond during the war. *The Stranger's Guide,* published in 1863, listed twenty "hospitals for Confederate Soldiers" in or near the city, in addition to three private hospitals. By January 1864 the number was reduced to thirteen. This later list included General Hospitals Nos. 1, 4, 9, 13, 21 and 24; and Winder, Chimborazo, Jackson, Howard's Grove, Robertson, Louisiana, and the Smallpox Hospital.[116] Hospitals operating in 1863 but probably closed by 1864 were the Alabama Hospital at Twenty-third and Franklin Streets; the Texas Hospital on lower Main Street; General Hospital No. 11 on Nineteenth Street, serving Florida troops; General Hospital No. 10, formerly the United States Hotel, at Sixth and Main; Henningsen Hospital, on Wall Street; Samaritan Hospital on Cary between Fifth and Sixth, and the Naval Hospital on Governor Street.

The Winder Hospital, situated on Cary Street in the western outskirts of Richmond, was organized in April 1862 and was under the charge of Surgeon Alexander G. Lane until the end of the war. V. Y. Conway and David H.

[114] Assistant surgeons early in 1864: C. L. Dunkley, S. E. Babcock, B. W. Harper, and J. F. J. McClery; acting assistant, J. B. McCarty.

[115] J. R. Gildersleeve: History of Chimborazo Hospital, Southern Historical Society Papers, v. 36, p. 86. Complete records of this hospital are in the Surgeon General's Office in Washington. Other assistant surgeons on duty there at various times, according to Dr. Gildersleeve, were George Ross, John G. Trevillian, W. B. Gray and H. Cabell Tabb of Richmond; George F. Alsop and W. H. Pugh of Norfolk; Board Woodson, Samuel Smith, Edward Adams, Shirley Carter, C. Jerome Cherry, and Thomas E. Stratton.

[116] Roster of General Hospitals, Department of Virginia. MS. in the Confederate Museum.

Tucker, the latter also surgeon of the Examining Board, were surgeons at this hospital in 1864. It consisted of five divisions, manned early in 1864 by Surgeons J. G. Dudley, John Chambliss, W. T. Sutton, C. A. Thomas, and Richmond A. Lewis.[117] It had a capacity of 4,800 beds, and the grounds covered one hundred and twenty-five acres. There was a dairy, ice house, large gardens worked by convalescent patients, and a bakery of such capacity that excess bread was sold for the prisoners at Libby and Belle Isle. This hospital owned two canal boats which made regular trips up the Kanawha Canal for supplies from the country. Miss Emily Mason, niece of James M. Mason, Confederate commissioner to England, was one of the matrons. Mrs. Archibald Cary and her daughter, Mrs. Burton N. Harrison, also served here.[118]

The Robertson Hospital at the corner of Third and Main Streets, in charge of A. Y. P. Garnett,[119] was the only private hospital allowed to continue its existence after the act of the Confederate Congress absorbing all hospitals into the military organization. On July 30, 1861, ten days after the first battle of Manassas, Miss Sally L. Tompkins of Richmond opened this hospital, equipping and operating it entirely at her own expense. When she learned of the orders which were about to close her institution, she appeared before President Davis, displayed the records showing the number of cases treated, the low incidence of death, and the high percentage of men returned to duty. The President met her appeal by one of the most remarkable military orders in history. He created Miss Tompkins a captain in the Confederate army and authorized the continuance of her organization. During the period of the war, August 1, 1861 to April 2, 1865 this hospital cared for 1,334 patients. The women assisting Captain Sally were Mrs. E. T. Semmes, Mrs. Mary A. Page, Miss A. P. Tabb, Miss Eliza Davenport, Mrs. B. Trigg, Mrs. James A. Jones, Mrs. John McGuire, Mrs. Williamson, Mrs. Baylor, Miss Agnes Haxall, Miss Bettie McMurdo, Miss Mollie McMurdo, Miss Kitty Heath, Mrs. Bowen, Mrs. William Bell, Mrs. Sandaige, Miss Rebecca Jones, Mrs. Deas, and Mrs. Dr. Wellford, all of Virginia except Mrs. Sandaige, who was from Louisiana.[120]

The Jackson Hospital near Hollywood Cemetery was organized into four divisions and was in charge of Surgeon F. W. Hancock. The heads of divisions

[117] Roster of General Hospitals. MS. in the Confederate Museum. Other surgeons were T. Tyler and T. Braxton; assistant surgeons, R. Murdock and J. A. Baden; acting assistants, G. A. Hamill, J. F. Carter and M. W. Gray.

[118] Photographic History of the Civil War, v. 7, pp. 284, 296.

[119] Other surgeons were C. L. Garnett and Thomas S. Latimer. Assistant surgeons, George H. Roberts, W. S. Love, F. W. Hancock and J. G. Cabell.

[120] Freeman: Calendar of Confederate Papers, p. 47. The register of the hospital is owned by the Confederate Museum.

early in 1864 were Surgeons J. S. Wellford, W. D. Hoyt, J. G. Cabell, A. J. Semmes, and W. A. Thom.[121] It cared for South Carolina, Georgia, and Louisiana troops.

General Hospital No. 4, for officers, was housed in the buildings of the Richmond Female Institute, on Tenth Street between Marshall and Clay, and was in charge of Surgeon James B. Read. Surgeons H. D. Martin and James Guild were associated with him. Assistant Surgeons were M. J. DeRossett, J. T. Meek and E. W. Latimer.[122] Officers were also cared for in private quarters, for which a register was maintained on Broad Street between Ninth and Tenth, and a special board of surgeons attended them. The board in 1864 included Drs. A. Y. P. Garnett, Peter Lyons, James Bolton, and W. S. Scott.

General Hospital No. 9, in Seabrook's Warehouse, Grace and Seventeenth Streets, was established early in the war as a receiving hospital, and was in charge of Surgeon J. J. Gravatt early in 1864. With him was associated Surgeon B. F. Herndon. Assistant surgeons were C. W. P. Brock, J. B. Brock, D. B. Smith, W. H. Hoodnitt, W. F. Richardson and J. P. Breckenridge; acting assistant surgeons, J. H. Jones and A. N. Wellford. General Hospital No. 13, on Twentieth between Main and Franklin Streets, was in charge of Surgeon H. T. Barton. Assistant surgeons were M. T. Bell, T. H. W. Upshur, S. G. Compton, D. B. Smith and R. Emory. It was referred to in *The Stranger's Guide* as the "Prison Hospital."

General Hospital No. 21 was on the corner of Twenty-fifth and Cary. Attached to this hospital during the first part of 1864 were seven surgeons and eighteen assistant and acting assistant surgeons.[123]

General Hospital No. 24, on the corner of Main and Twenty-sixth Streets, was in charge of Surgeon Otis F. Manson. J. W. Sherrod and A. N. Bellinger were assistant surgeons early in 1864.

Howard's Grove Hospital was on the Mechanicsville Turnpike one mile from Richmond, where soon after the outbreak of hostilities an army corps was established. The hospital was in charge of Surgeon T. P. Temple.[124] After the war it

[121] Assistant surgeons were James Thornley, R. O. Leary, M. W. Smith, W. R. Barron, H. C. Ghent, J. N. Boggs, James Leffers, J. S. Wilson, Seabrook Jenkins, A. N. Bellinger, and S. M. Dold; acting assistant surgeons, M. W. Gray and H. C. Scott. (Roster of General Hospitals, January-April, 1864. MS. owned by the Confederate Museum.)

[122] Roster of General Hospitals, January-April. 1864. MS. in the Confederate Museum.

[123] Surgeons John Wilkins, G. W. Semple, W. A. Spence, B. F. Herndon, Jr., O. F. Baxter, F. F. Fry and T. Eliason; assistant surgeons, J. R. Jones, B. A. Curtis, E. T. Sabal, S. B. Simmons, T. W. Dandridge, H. St. G. Hopkins, G. E. Alsop, T. W. Glocker, R. M. Patterson, L. J. Jones, C. L. Garnett, J. T. Meek and J. W. Sherrod; acting assistant surgeons, O. B. Finney, S. B. Christian, N. A. Kitchell, E. L. Carter, and W. H. Gibbs. (MS. in the Confederate Museum.)

[124] Other surgeons at different periods were T. M. Palmer, C. D. Rice and John Wilkins. Assistant surgeons were J. C. Gregory and W. F. Richardson. (MS. in the Confederate Museum.)

was long used as a colored insane asylum. Another Richmond hospital in 1864 was the Smallpox Hospital, in charge of Surgeon Charles Witsell.[125] The Louisiana Hospital, in the buildings of the Baptist College at the western termination of Broad Street, was in charge of Surgeon W. C. Nichols in 1864.[126]

The private hospitals which already existed in 1861 continued during at least a part of the war and cared for not a few Confederate sick and wounded. They included Bellevue Hospital on Broad Street, Church Hill; Medical College of Virginia Infirmary, on Marshall below Twelfth; and the Infirmary of St. Francis de Sales, Brook Avenue, near Bacon's Quarter Branch.[127]

The "Wayside Hospital" for "sick and wounded soldiers, on furlough or honorably discharged from the service, who are temporarily detained in Richmond" was on the corner of Franklin and Nineteenth Streets. Similar hospitals were maintained at Petersburg, Danville, Farmville, Lynchburg, Charlottesville, Liberty, and Staunton.[128]

III. HOSPITALS OUTSIDE THE CAPITAL

In Petersburg in the last year of the war, according to the roster of General Hospitals for the Department of Virginia, preserved in the Confederate Museum, the hospitals were under the general charge of Surgeon J. Herbert Claiborne. The hospitals here at this time consisted of the Poplar Lawn Hospital under Surgeon R. P. Page, assisted by E. A. Drewry and T. J. Lockett; the North Carolina Hospital under Surgeon J. G. Broadnax and Assistant Surgeons H. L. Hines and W. A. B. Norcum;[129] the South Carolina Hospital under Surgeons Francis P. Porcher and J. T. Kilby, Assistant Surgeons Leo Henley, David Steel and D. E. Smith, and Acting Assistant T. A. Proctor; the Virginia Hospital under Surgeon J. H. Pottenger and Assistant Surgeon J. E. Smith; the Petersburg General Hospital under Surgeon W. U. Morris and Assistant Surgeons J. C. Branch, T. J. Lockett and F. M. Henderson; the Confederate States Hospital under Surgeon J. P. Smith and Assistant Surgeons W. L. Baylor and

[125] Assistant surgeons were A. Wallace, William Bellinger, W. M. Whistler, B. A. Curtis, J. M. Payne, W. H. Babcock and J. B. Stinson; acting assistant surgeons, H. E. Bissell and J. Talbot.

[126] Assistant surgeons were H. N. Young, L. J. Jones, B. A. Curtis and S. R. Herd; acting assistant surgeon, Theo. Chacere.

[127] The Stranger's Guide and Official Directory for the City of Richmond, 1863, p. 27.

[128] The Stranger's Guide and Official Directory for the City of Richmond, 1863, p. 27.

[129] C. E. Johnson, Surgeon General of North Carolina, in the fall of 1861 equipped and opened a North Carolina Hospital at Petersburg, Virginia, thoroughly supplied with everything for a first-class general hospital. In the winter of 1861-'62 "he equipped and opened the 2d North Carolina Hospital in Petersburg, Virginia, having it as well supplied and equipped as the former one." Hines, Peter E., M. D.: Memoir of C. E. Johnson, Surgeon General.

R. E. Lewis; the Wayside Hospital under Surgeon M. P. Scott, and the smallpox hospital under Acting Assistant Surgeon C. F. Crouch.

According to the Roster the Lynchburg hospitals, in charge of Surgeons W. O. Owen and A. Taylor, Assistant Surgeons M. W. Smith and H. C. Somerville and Acting Assistant Surgeon W. H. Bell, were: General Hospital No. 1 under Surgeons G. W. Thornhill, J. C. Mercer, John Minor, and P. S. Carrington, and Assistant Surgeons J. J. Terrell, H. C. Chalmers, and W. W. Hamner; General Hospital No. 2 under Surgeons W. C. N. Randolph, M. H. Houston, John R. Page and C. R. Kemper, and Assistant Surgeons B. St. G. Tucker, G. A. D. Galt and M. E. Vason; General Hospital No. 3 under Surgeons D. L. McLaughlin, R. S. Lewis, J. C. Mercer, and T. H. Fisher and Assistant Surgeon E. A. Craighill; the Pratt Hospital under Surgeon J. H. Murray and Assistant Surgeon W. M. S. Butler; the Ladies' Relief Hospital under Surgeon W. C. Warren, and the Wayside Hospital under Surgeon A. C. Smith and Assistant Surgeon J. S. Wharton.

In 1864 there was a large general hospital in Danville under Surgeon G. H. Davidson, assisted by sixteen surgeons and assistant surgeons.[180] The general hospital in Farmville was in charge of H. D. Taliaferro.[181] The large general hospital at Charlottesville was under the care of Surgeon James L. Cabell, assisted by thirteen surgeons and assistant surgeons.[182] Edward Warren, who served there early in the war, wrote: "I can see before me the great rotunda filled with hastily-constructed beds...the surgeons and their assistants moving through the wards...and the faithful negro attendants."[183] Dr. Orlando Fairfax was another of the surgeons at Charlottesville. Warren later became surgeon general of North Carolina.

At Liberty, now Bedford City, the general hospital was in charge of Surgeon Benjamin Blackford, a native of Virginia and a practitioner of Lynchburg, who had been chief surgeon at the Front Royal Hospital until its abandonment early in 1862.[184] In October 1863 Liberty Hospital occupied four large tobacco fac-

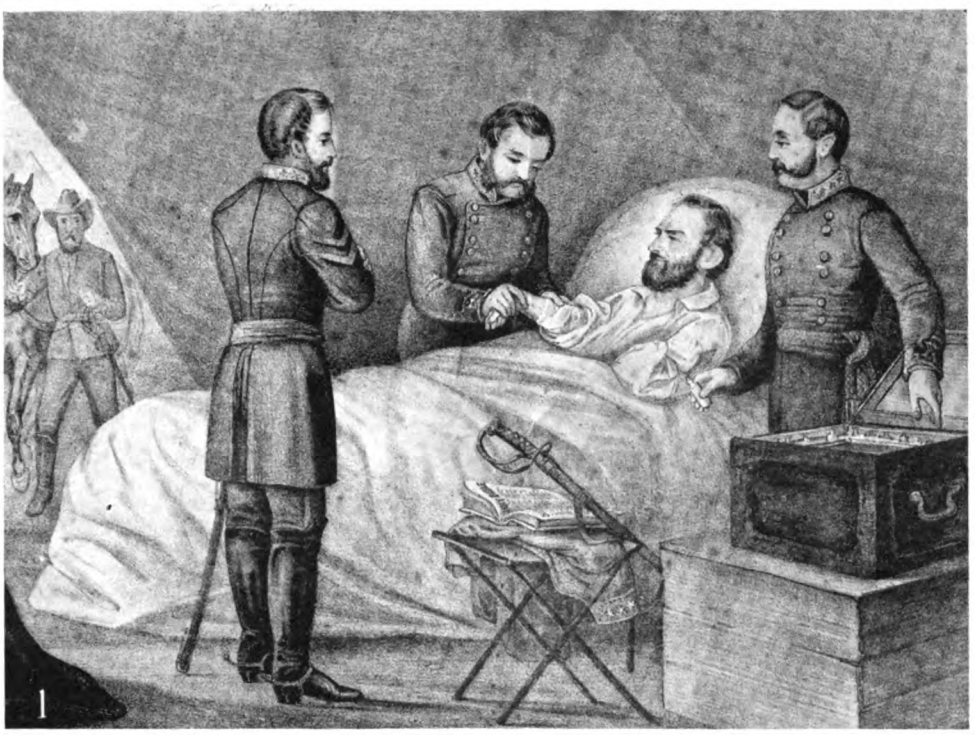
[180] Surgeons G. J. Carmichael, J. F. Fauntleroy, T. B. Memminger and John Ward; assistant surgeons, G. W. Hunter, J. R. Hinton, F. A. Beall, W. T. Gregory, F. J. Moses, P. S. Dance, J. H. Gaskins, A. Wayt, T. W. Glocker, H. C. Somerville, and E. F. Williams; acting assistant surgeon, J. R. Wilson.

[181] He was assisted by Surgeons R. P. Walton and J. B. Tuft, and by Assistant Surgeons W. G. Hancock and S. C. Smith.

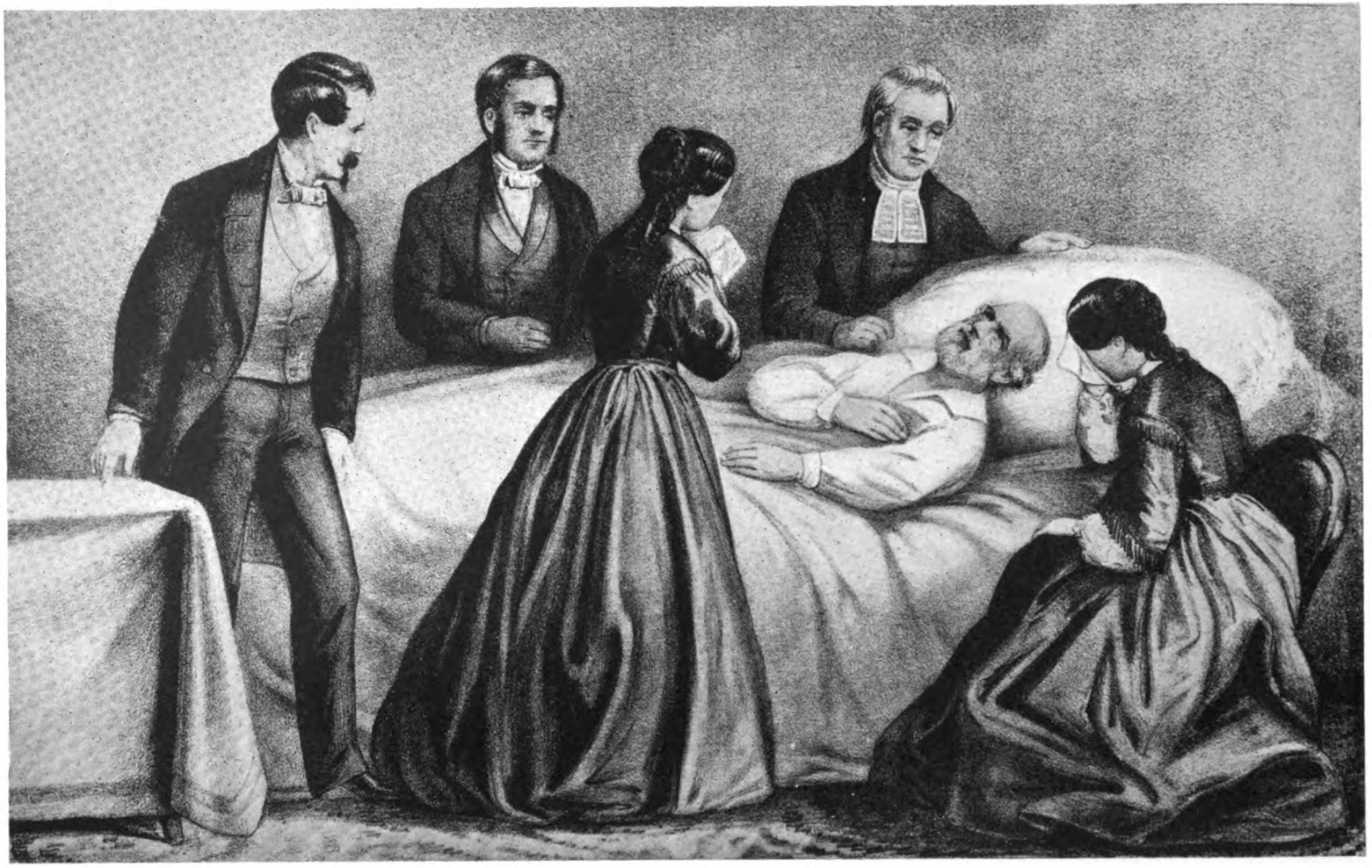
[182] J. S. Davis, B. W. Allen, C. W. Chancellor, J. E. Chancellor, John Lewis, S. S. Neill, Jos. W. Akin; assistant surgeons James McIntosh, T. A. Michie, M. McKennie, F. L. Bronaugh and F. M. Letcher; acting assistant R. M. Anderson.

[183] Warren: A Doctor's Experiences on Three Continents, p. 273.

[184] On November 28 Blackford informed Surgeon Thomas H. Williams, formerly medical director of the Confederate Army of the Potomac, now medical director and inspector of hospitals in Virginia: "Accommodations of the Front Royal Hospital prior to its abandonment: 2 new buildings 500; and accom. for about 200 in the Court House, Baptist and Episcopal Churches and Academy. Total about 750."



1. The Deathbed of Stonewall Jackson. 2. The Burial of Latane.



THE DEATHBED OF ROBERT E. LEE.

Lithograph by Currier & Ives.

tories, two cabinet shops, one large brick building formerly the Piedmont Institute, and two large buildings especially constructed for hospital purposes. The capacity of the hospital was about eight hundred patients.[185] A smallpox hospital, accommodating about forty patients, was attached. Interesting details concerning the nature and operation of this general hospital (which was used chiefly for convalescents) have been preserved in official correspondence.[186] On May 21, 1862 Blackford wrote Surgeon D. S. Green of the general hospital in Lynchburg: "In view of the large number of patients transferred from your hospital here, who never report, I suggest that the train doors be locked until they arrive..." Surgeon Owen of Lynchburg replied that the doors would be locked henceforth. On May 27 the surgeon general advised Blackford that the hospital accommodations at Liberty would not be required to exceed eight hundred or a thousand beds. About the middle of June Blackford requested the surgeon general to give him another medical officer: he had accommodations for seven hundred patients and only four assistant surgeons. By July he had eight hundred sick and only five assistant surgeons.

On November 18, 1862 Surgeon General Moore wrote Blackford: "With the view of obtaining some additional information on the Surgical Pathology of the nervous system, Med. Directors are instructed to require of the Med. Officers serving in their respective districts specific report of all local or General Diseases of the nerves which may have been treated or observed by them, resulting from or subsequent upon wounds or surgical operations."

On January 3, 1863 Blackford wrote the surgeon general that smallpox had appeared and that he had taken an unoccupied building at twenty dollars per month, in a ravine, isolated from the village. It would accommodate fifteen or twenty patients until a smallpox hospital could be erected. Moore replied with orders to vaccinate all inmates, as well as the people of the vicinity.

In June 1864 Hunter's Raid forced Blackford to evacuate Liberty Hospital, sending as many of the sick as possible to Lynchburg and Danville and leaving Surgeon William J. Moore in charge of those too sick to move. Blackford returned after the raid and reported that most of his supplies had been undisturbed by the enemy. W. A. Carrington, medical director at Richmond, wrote his approval of Blackford's action during the raid, "with the exception that there need be no anxiety to remove Hospital property or Medical Officers from the scene of action as they are always respected by the enemy."

[185] He was assisted during the first months of 1864 by Surgeons W. J. Moore and Wm. Selden, by Assistant Surgeons Hume Field, W. S. Frierson, B. F. Claggett, C. A. Board and W. S. Nesbitt; and by Acting Assistant Surgeons C. W. Crozier and H. S. Paisley.

[186] Freeman: Calendar of Confederate Papers, p. 15 ff.

On February 4, 1865 Blackford wrote Carrington: "Skin diseases are assigned to separate wards—cases of hospital Gangrene, Erysipelas, etc. are treated in tents kept for the purpose—to economise fuel, I concentrate convalescents in large wards and close others when I can do so—wards are being white-washed and renovated for the Spring campaign."

The General Hospital in Staunton was in charge of Surgeon William Hay.[137] The hospital at Montgomery Springs was under Surgeon J. L. Woodville;[138] that at Huguenot Springs under Surgeons W. T. Walker and W. A. Selden and Assistant Surgeon A. S. Eppes; that at Lexington under Surgeons R. W. Daily and H. H. McGuire; that at Pearisburg under Surgeon Thomas Creigh and Assistant Surgeon E. E. Kellam; that at Amelia Court House under Surgeon Monro Banister,[139] and that at Harrisonburg under Surgeon A. R. Meem and Assistant Surgeon N. W. Calhoun. White Oak General Hospital at Ford's Depot was in charge of Acting Assistant Surgeon B. P. Reeze. The Moore Hospital at Manassas, named for Surgeon General S. P. Moore, with J. Bell, chief surgeon, and Charles H. Todd, assistant surgeon, was composed of wooden pavilions containing in all about 1,400 beds and a medical staff of twenty-four surgeons. It was abandoned May 4, 1862, when General Johnston evacuated Manassas, and was reëstablished at Gordonsville, where Dr. Bell died in April of typhoid fever.[140]

The list closes with the Nelson Hospital in charge of W. H. Coffin in 1862, the Orange Court House Hospital in charge of Harvey Black in 1864, and the Chaffin's Bluff Hospital in charge of Surgeon David H. Tucker and Acting Assistant Surgeon Charles L. Gwyn in 1862.[141] Tucker was later in charge of Winder Hospital in Richmond. There were also in 1864 receiving hospitals at Gordonsville under Assistant Surgeon B. M. Lebby[142] and at City Point under Acting Assistant Richard Eppes.[143]

In 1861 the Secretary of War was authorized to employ regular nurses in addition to those who had volunteered and those who were detailed from the

[137] With him also were Surgeons J. C. M. Merrillat, L. Waddell and R. F. Baldwin; and Assistant Surgeons R. H. Woodward, R. H. Bush, R. C. Eve and Thomas Opie.

[138] Assisted by Surgeons John H. Hunter and B. Roemer; Assistant Surgeons R. T. Ellett, B. W. Bradley and G. H. Caperton.

[139] December 10, 1861. Freeman: Calendar of Confederate Papers, p. 44 ff. Banister was still there in 1864.

[140] Southern Practitioner, 1906, v. 28: Civil War Reminiscences, by Dr. Charles H. Todd.

[141] Freeman: Calendar of Confederate Papers, p. 44.

[142] Assisted by T. J. Wilson, Henry Marriott, A. F. Schulze and J. L. Read.

[143] The personnel of all staffs referred to is to be found, unless otherwise noted, in the Roster of General Hospitals, Department of Virginia, for January, February, March, and April, 1864. MS. in the Confederate Museum.

line for the purpose.[144] An act of Congress the next year fixed the salary of these nurses at $25.00 a month.[145] The budget of the medical department for 1865 provided for $700,000 to be expended as pay for extra nurses and cooks.[146] At first the sick were nursed chiefly by men detailed from the line. Chisholm in his *Manual* states that one nurse to ten patients was the accepted proportion and gives cleaning and the distribution of rations and medicines as part of the duty of nurses.[147] Privates so employed were given extra pay.

On December 14, 1861 Thomas H. Williams, medical director of the Army of the Potomac (later called the Army of Northern Virginia), issued orders that "Surgeons in charge of Gen. Hospitals will hire civilians and negroes as nurses instead of detailed enlisted men—when these cannot be had, commandants of posts will press free negroes into service—when civilians can neither be hired nor pressed, details may be applied for...Enlisted men now acting as nurses will return to their commands when nurses can be had." On December 17, Blackford, then still at Front Royal, replied that there were no free negroes to be pressed—all served as officers' servants—but that he would endeavor to procure them rather than ask for details.

The defects of the plan of drawing nurses from the fighting forces were apparent. The practice went on, although it was clear that the thinning grey ranks could not spare able-bodied men from the line of combat. General Order No. 13 from the medical director of the Army of Northern Virginia again directed surgeons to hire civilians and negroes as nurses for general hospitals wherever possible, to press free negroes into service if necessary, and to requisition enlisted men only as a last resort.[148] In 1862 Major General Maury requested authority to visit hospitals and return convalescents improperly remaining as nurses. He said there were many so remaining. General Lee complained late in the war that able-bodied men were still being employed as nurses, but the surgeon general answered that only disabled soldiers were so used.[149]

The records are not clear as to how extensively white female nurses were employed. In the numerous private hospitals that sprung up soon after the opening of hostilities they were undoubtedly the chief nursing force. Some nursing was performed by Catholic Sisters, notably after the first battle of

[144] Statutes at Large, C. S. A., August 21, 1861, p. 186.
[145] Statutes at Large, C. S. A., September 27, 1862, p. 63.
[146] War of the Rebellion Records, series 4, v. 3, p. 1111.
[147] Chisholm: A Manual of Military Surgery, pp. 62-80.
[148] Freeman: Calendar of Confederate Papers, p. 15.
[149] War of the Rebellion, Official Records, series 1, v. 33, p. 1196. See also General Order No. 35 of the Conscription Department, Southern Historical Society Papers, v. 2, p. 125.

Manassas,[150] and certainly many women served without pay in various capacities. "The daughters of General Lee, Mrs. G. W. Randolph, and many others were frequent visitors to the Richmond hospitals, where they read to the convalescents, wrote letters for them and fed them."[151] In 1862 "a corps of nurses for the camps and hospitals"[152] was regarded as essential by the congressional investigating committee, but the record of such an organization is lacking. As late as February 1864 the surgeon general pointed out that there was no regular hospital corps in reserve, with matrons, attendants, etc., and that the only attendants available were disabled and incompetent soldiers and negroes. Women were extensively employed as matrons—forty-five were on duty at Chimborazo Hospital under Mrs. Minge. The act of September 27, 1862 provided that each hospital be allowed two matrons, two assistant matrons, and two ward matrons for each ward; also one ward master for each ward, "giving preference to females." Nurses, male or female, were to be employed by the surgeons. The only female physician known to have been practising in Virginia at this time served in the capacity of a nurse in the general hospital at Charlottesville. Surgeon Edward Warren wrote of her: "I met also for the first time that rara-avis in the field of Southern medicine, a female physician, in the person of Miss Moon, a native of Albemarle County, Virginia, and a graduate of the Woman's Medical College of Philadelphia. She was a lady of high character and of fine intelligence, and, though she failed to distinguish herself as a physician, she made an excellent nurse, and did good service in the wards of the hospital."[153]

DAVID MINTON WRIGHT, 1809-1863

On July 11, 1863 a column of negro troops moved down one of the sidewalks of Norfolk, jostling men, women, and children into the gutter as they went. Among those rudely handled was Dr. David Minton Wright. Stepping aside into a doorway he could not resist a sharp declaration of defiant disgust. Lieutenant A. L. Sanborn, U. S. A., marching at the head of the troops, hearing his remark, advanced threateningly with drawn sword. A friend thrust a pistol into Dr. Wright's hands, and he called out to the approaching officer to "stand off." His words were unheeded, and he fired and wounded his assailant in the hand. A general mêlée followed, and other shots were fired. The lieutenant

[150] Southern Practitioner, v. 28, p. 476.
[151] Photographic History of the Civil War, v. 7, p. 296.
[152] War of the Rebellion, Official Records, series 4, v. 1, p. 883.
[153] Warren: A Doctor's Experiences on Three Continents, p. 279.

stumbled into an adjacent store and dropped dead. Dr. Wright was arrested, court-martialed, and sentenced to be hanged. Every effort to stay his sentence was made in vain. Finally his daughter, Miss Penelope Wright, gained admittance to his cell and succeeded in conveying to him a disguise sufficiently good to enable him almost to make his escape. When he had gone about fifty yards from the outer door, his unusual height attracted the sentry's attention. He was pursued and captured, and the ignominious sentence was carried into effect. Amid universal mourning he was hanged in the city of Norfolk on October 23, 1863. His body afterwards lay in state in Christ Church, while hundreds of people did honor to his memory.

The Virginia General Assembly, on March 10, 1864, resolved to "place upon permanent record her high appreciation of a son, whose courage, zeal and devotion, marked with blood the first effort to establish upon her soil an equality of races, and introduce into our midst the leveling dogmas of a false and pretended civilization."[154]

Dr. Wright was born in Nansemond County in 1809, was educated at Captain Patrick's Military School in Middletown, Connecticut, and after an apprenticeship under Dr. William Warren of Edenton, North Carolina, graduated in medicine from the University of Pennsylvania. He began practice in Norfolk and was one of those who went through the yellow fever epidemic of 1855. He was a respected and successful practitioner of fifty-one years of age when the war broke out, and he continued his work even after the occupation of the city by the Federals in May 1862. Two of his sons fought in the Confederate ranks. One of them was killed at the Battle of Gettysburg.[155]

GENERALS AMONG THE SICK AND WOUNDED

The wounds and sicknesses of the Confederate high command, who enjoyed no immunity to the hazards of battle, were occasions of the greatest responsibility and concern for the medical department.

General Joseph E. Johnston was severely wounded at the battle of Fair Oaks, May 31, 1862. Writing of the occasion he said: "I received a musket-shot in the shoulder, and was unhorsed soon after by a heavy fragment of shell which struck my breast. I was borne from the field—first to a house near it,

[154] Acts of the General Assembly, 1863,-'64, p. 85.
[155] William and Mary Quarterly, v. 8, p. 66. Warren: A Doctor's Experiences on Three Continents, p. 191.

thence to Richmond."[156] It was several months before he recovered, Robert E. Lee in the meantime taking command of the army defending Richmond.

On May 2, 1863, during the battle of Chancellorsville, there were two important Confederate generals among the casualties. A. P. Hill was slightly wounded but was able to resume his command four days later.[157] Stonewall Jackson, shot by his own men while reconnoitering the position of the enemy, was not so fortunate. An account of this calamity to the Confederacy is given in the words of his medical director, Hunter McGuire: "Supported upon either side by his aids, Captains James Smith and Joseph Morrison, the General was moved slowly and painfully towards the rear...A litter having been obtained, he was placed upon it, and the bearers passed on as rapidly as the thick woods and rough ground permitted. Unfortunately, another one of the bearers was struck down, and the litter having been supported at each of the four corners by a man, fell and threw the General to the ground. The fall was a serious one...

"He was placed upon the litter again, and carried a few hundred yards, when I met him with an ambulance. I knelt down by him, and said, 'I hope you are not badly hurt, General.' He replied, very calmly, but feebly, 'I am badly injured, Doctor; I fear I am dying.' After a pause he continued, 'I am glad you have come. I think the wound in my shoulder is still bleeding.' His clothes were saturated with blood, and hemorrhage was still going on from the wound. Compression of the artery with the finger arrested it, until lights being procured from the ambulance, the handkerchief which had slipped a little, was readjusted ...Some whiskey and morphia were procured from Dr. Straith, and administered to him, and placing him in the ambulance, it was started for the Corps Field Infirmary, at the Wilderness Tavern...

"I sat in the front part of the ambulance with my finger resting upon the artery, above the wound, to arrest bleeding if it should occur...

"At two o'clock Sunday morning Surgeons Black, Walls and Coleman being present, I informed him that chloroform would be given him, and his wounds examined. I told him that amputation would probably be required, and asked if it was found necessary, whether it should be done at once. He replied promptly, 'Yes, certainly; Doctor McGuire, do for me whatever you think best.' Chloroform was then administered, and as he began to feel its effects, and its relief to the pain he was suffering, he exclaimed, 'What an infinite blessing,'

[156] Battles and Leaders of the Civil War, v. 2, p. 215.
[157] War of the Rebellion, Official Records, series 1, v. 25, part 1, pp. 885, 889, 904; part 2, p. 782.

and continued to repeat the word 'blessing,' until he became insensible. The round ball (such as is used for the smoothbore Springfield musket) which had lodged under the skin, upon the back of his right hand, was extracted first. It had entered the palm, about the middle of the hand, and had fractured two of the bones. The left arm was then amputated, about two inches below the shoulder, very rapidly, and with slight loss of blood, the ordinary circular operation having been made. There were two wounds in this arm, the first and most serious was about three inches below the shoulder joint, the ball dividing the main artery, and fracturing the bone. The second was several inches in length; a ball having entered the outside of the forearm, an inch below the elbow, came out upon the opposite side, just above the wrist. . . . The next morning he was free from pain, and expressed himself sanguine of recovery...About ten o'clock, his right side began to pain him so much that he asked me to examine it. He said he had injured it, in falling from the litter the night before, and believed that he had struck it against a stone or the stump of a sapling. No evidence of injury could be discovered by examination; the skin was not broken or bruised, and the lung performed, as far as I could tell, its proper functions ...By eight o'clock, Sunday night, the pain in his side had disappeared...This night he slept well...Very early Tuesday morning, he was placed in an ambulance and started for Guinea's Station, and about eight o'clock that evening he arrived at the Chandler House...Wednesday he was thought to be doing remarkably well...

"Simple lint and water dressings were used, both for the stump and hand, and upon the palm of the latter, a light short splint was applied, to assist in keeping at rest the fragments of the second and third metacarpal bones. He expressed great satisfaction when told that his wounds were healing. . . .

"About one o'clock Thursday morning, while I was asleep upon a lounge in his room, he directed his servant, Jim, to apply a wet towel to his stomach, to relieve an attack of nausea, with which he was again troubled. . . . About daylight I was aroused, and found him suffering great pain. An examination disclosed pleuro-pneumonia of the right side. I believed, and the consulting physicians concurred in the opinion, that it was attributable to the fall from the litter, the night he was wounded. . . . Cups were applied, and mercury, with antimony and opium administered. . . . When Dr. Breckinridge (who with Dr. Smith, had been sent for in consultation) said he hoped that a blister, which had been applied, would afford him relief, he expressed his own confidence in it, and in his final recovery. . . .

"Dr. Tucker, from Richmond, arrived on Saturday, and all that human skill could devise was done, to stay the hand of death. He suffered no pain to-day, and his breathing was less difficult, but he was evidently hourly growing weaker. . . .

"After a moment's pause he asked her [his wife] to call me. 'Doctor, Anna informs me that you have told her that I am to die today; is it so?' When he was answered, he turned his eyes toward the ceiling, and gazed for a moment or two, as if in intense thought, then replied, 'Very good, very good, it is all right.'

"His mind now began to fail and wander, and he frequently talked as if in command upon the field, giving orders in his old way; then the scene shifted, and he was at the mess table, in conversation with members of his staff; now with his wife and child; now at prayers with his military family.

"A few minutes before he died, he cried out in his delirium, 'Order A. P. Hill to prepare for action!' . . . Presently . . . he said quietly, and with an expression, as if of relief, 'Let us cross over the river, and rest under the shade of the trees'; and then, without pain, or the least struggle, his spirit passed from earth to the God who gave it."[158]

Before passing criticism on McGuire's amputation of Jackson's arm it should be remembered that the experience of every war up to the time of the Civil War had more and more confirmed the advantage of amputation. It was stated unequivocally in a textbook widely used at that time, that "every hour 'the humane operation' is delayed, diminishes the chances of a favorable issue."[159] The Royalist surgeon, Richard Wiseman, counselled: "Cut off the limb quickly while the soldier is heated and in mettle."[160]

One of the consultants at the bedside of Jackson was Samuel Brown Morrison (1828-1901) of Rockbridge. Robert L. Dabney related that "The chaplain was now [Thursday] dispatched to the Army . . . to bring the General's family physician, Dr. Morrison, now chief surgeon of Early's Division. . . . At two o'clock P. M., Dr. Morrison arrived. When he spoke to him, the General looked up and said affectionately: 'That's an old familiar face.' "[161]

At the battle of Groveton, August 1862, General Richard S. Ewell was desperately wounded in the leg. Dr. Morrison, who was the chief surgeon of the

[158] Richmond Medical Journal, 1866, v. 1, p. 403 ff.
[159] Macleod: Notes on the Surgery of the War in the Crimea, p. 163.
[160] Macleod: Notes on the Surgery of the War in the Crimea, p. 166.
[161] Dabney: Life and Campaigns of Lieut.-Gen. Thomas J. Jackson, p. 716.

division, successfully amputated it.[162] Ewell continued in active service for the rest of the war.

Jeb Stuart, Major General of Cavalry, was thirty-two years old when a pistol ball pierced his liver at Yellow Tavern on the outskirts of Richmond at night in the midst of a running fight. He was lifted from his horse, unable to walk, and rested against a tree until Surgeon J. B. Fontaine and an ambulance could be sent for. Arriving under heavy fire, they lifted him into it. With his head resting on trooper Wheatley's knees, in great pain and shock, he was driven off. The doctor examined him as they jolted along. He suffered a great deal, but refused the brandy that was offered him. In the late afternoon they reached the home of his sister-in-law, the wife of Dr. Brewer, on West Grace Street in Richmond. The wound was fatal and nothing could be done. His wife was sent for. When Dr. Brewer told him that he would die soon, he replied, "I am resigned if it be God's will."[163]

While the steel engraving of the burial of Latane is familiar to most Virginians, few know that this young officer, whose death was the only casualty to mar Stuart's brilliant ride around McClellan's army in June 1862, was a physician. His body was left at the house of Dr. William Brockenbrough, and the next day the Brockenbrough and Newton ladies buried him, assisted only by slaves—all the men were away with the army. A request for a chaplain from the Federal cavalry near-by was refused, and the service was read by one of the women. Young Latane was a captain in the Ninth Virginia Cavalry when he was killed near Old Church, Hanover. He was born in 1833, the son of Henry and Susan Allen Latane. He had studied medicine at the University of Virginia in 1851 and graduated from the Medical College of Virginia in 1853. He was practising at "The Meadows" at the outbreak of the war.[164]

During the battle of the Wilderness, May 6, 1864, General James Longstreet was dangerously wounded by his own men. "I received," he wrote afterwards, "a severe shock from a minie ball passing through my throat and right shoulder. The blow lifted me from the saddle, and my right arm dropped to my side. . . ." He was carried to the rear by members of his staff. Still unable to return to

[162] Morrison was a graduate of Washington College and an M. D. from the University of Virginia. After postgraduate work in Philadelphia and New York, he settled in Lexington. In the Confederate service he rose from regimental surgeon to medical inspector, second corps, Army of Northern Virginia. In 1869 he served in the legislature, and in 1873 he moved to Rockbridge Baths. He died in 1901. (Information from his grandson, Dr. J. Morrison Hutcheson of Richmond.)

[163] Thomason: Jeb Stuart, pp. 492, 499.

[164] Article by Wm. Campbell, in the Southern Historical Society Papers, new series, v. 39, p. 86.

duty, he wrote in October that the doctors gave him "little reason to hope to recover the use of my arm even within a year."[165] Drs. Cullen, Barksdale, Wood, and Guild made the official report to General Lee of Longstreet's condition, pronouncing the wound "not necessarily fatal."[166]

General Lee died October 12, 1870, at the age of sixty-three, of what was probably a vascular accident terminating cardiovascular disease, manifest as early as the battle of Fredericksburg in 1862. At that time he suffered from "a sore throat that resulted in rheumatic inflammation of the sac enclosing the heart." "For over a week past he has been sick," wrote Surgeon Samuel M. Bemiss, April 10, 1863. "His physician was taken sick and I visited him every afternoon."[167] "With white beard all over his face and white hair," General Lee impressed his physician as prematurely old at fifty. In 1870 he suffered from aggravating dyspnœa and, observing that there was "no change in the stricture in my chest," stated that his "complaint is fixed and old . . . pain along the breast bone always returns on making an exertion."[168] Dr. M. H. Houston of Richmond, who examined him in that year, "found him laboring under disease, the foundation of which seems to have been laid in an attack which he had in 1863 after the Battle of Fredericksburg. . . . The diagnosis is obscure yet the symptoms point to chronic rheumatic pericarditis." In October 1870 Mrs. Lee wrote her cousin, Miss Mary Meade: "He stood up at the foot of the table to say grace but did not utter a sound & sank back on a chair. . . . [The doctors] applied cold cloths to his head & hot applications to his feet.... They cupped him & gave him medicine . . . but on Sunday night he suddenly became worse . . . until Tuesday night when *all* hope was relinquished."[169]

[165] Longstreet: From Manassas to Appomattox, pp. 564, 574.
[166] War of the Rebellion, Official Records, series 1, v. 51, part 2, p. 893.
[167] MS. in the possession of Samuel Bemiss of Richmond.
[168] Information from Dr. Douglas Freeman of Richmond.
[169] Virginia Magazine of History and Biography, v. 35, p. 24. Currency has been given to a strange story dealing with the supposed death of General Lee's mother fifteen months before his birth. She "lay in her coffin for four days and was then laid to rest in the family mausoleum for three days before it was discovered that she was alive." (Lexington Dispatch, quoted in Charity and Children, published at Thomasville, North Carolina, November 5, 1931.)

CHAPTER XIV

OTHER WARS

I. THE WAR OF 1812

THE TREATY OF GHENT, signed in August 1814, closed two years of disgraceful warfare, redeemed only by the naval exploits of American seamen and the decisive victory of Andrew Jackson at New Orleans. At the outset of the war President James Madison was authorized to enlarge the army from 6,000 to 25,000, to call for 50,000 volunteers, and in defense of the coast to make use of 100,000 state militia; but in the absence of a concerted plan, cohesion, organization, and able officers, failure was a foregone conclusion.[1]

The medical department was as bad as any other service of the army. In fact, when the war began, no medical department existed. There were a few hospital, regimental, and garrison surgeons and surgeons' mates[2] but no reserves of hospital stores. An appalling indifference to the welfare of the common soldier added to the difficulties of the situation. Scarcely anything has been written of the conduct of the medical department during this war. To James Mann, a hospital surgeon attached to the northern division of the army, we are indebted for most that we know. He tells us that the troops suffered chiefly from malaria, diarrhœa, dysentery, typhoid fever, ophthalmia, rheumatism, pneumonia, and influenza and describes epidemics of the latter not unlike those of the recent world war.[3]

Commenting on the inefficiency of the medical service he states that "at the commencement of the war, most unfavorable representations were publicly made, of every department of the army. The medical, in connexion with others, was exhibited in reproachful language. The bad management of hospitals was a subject of severe animadversion. The physicians and surgeons of the army were either ignorant of their professions, or inattentive to their duty. The distresses of the sick were portrayed in gloomy colours. The number of deaths in consequence of disease, although the mortality was great, was vastly

[1] Ellis: Library of American History, v. 3, pp. 656-718.
[2] Hospital surgeons and mates outranked regimental and garrison officers of the same grade. Packard: History of Medicine in the United States, v. 1, p. 621.
[3] Mann: Medical Sketches of the Campaigns of 1812-'13-'14, p. 17.

exaggerated."[4] Surgeon Mann was exasperated by the arrogance of young and inexperienced line officers, who, he said, invested with authority, "often affect to despise counsel offered by surgeons; who, under the present establishment, have no rank nor command in the army."[5] In the reorganization of 1813 James Tilton, former Revolutionary surgeon who had served in Virginia, was appointed physician and surgeon general, and some reforms were instituted, chiefly in the matter of hospital construction.

We have no record of the work of the medical department in the South. There was little fighting in Virginia, and although Virginia surgeons shared the hardships of the conflict on other frontiers few details of their real contribution to the medical service are known. There is, however, a vivid account in William Beaumont's diary of one engagement at Yorktown. On September 27, 1812 he wrote: "Sailed into harbor (York Town) and came to anchor a little below the British Garrison. We now . . . effected a landing. . . . A hot engagement ensued, in which the enemy lost nearly a third of their men and were soon compelled to quit the field. . . . The enemy returned into garrison, but . . . were soon obliged to evacuate it. . . . Driven to this alternative, they devised the inhuman project of blowing up their Magazine (containing 300 Bbls. powder), the explosion of which, shocking to mention, had almost totally destroyed our Army. Above 300 were wounded, and about 60 killed dead on the spot. . . . After this sad disaster our Army marched into the Garrison. . . . Our Army was about 1,500 strong. . . . A most distressing scene ensues in the Hospital—nothing but the Groans of the wounded and agonies of the Dying are to be heard. The Surgeons wading in Blood, cutting off arms, legs, and trepanning heads to rescue their fellow creatures from untimely deaths. . . . It awoke my liveliest sympathy, and I cut and slashed for 48 hours without food or sleep. . . .

"Sept. 28th 10 Ock. A. M. Just got time to suspend capital operation, whilst I can take a little refreshments to sustain life, for the first time since four o'clock yesterday. Return again to the bloody scene of distress, to continue dressing, Amputating and Trepanning. Dressed rising of 50 patients, from simple contusions to the worst of compound fractures, more than half of the last description. Performed two cases of amputation and one of trepanning. . . ."[6]

Ignorant of the names of all of the Virginia surgeons, we are assured that among them in the regular army were: Francis H. Peyton, William Upham,

[4] Mann: Medical Sketches of the Campaigns of 1812-'13-'14, p. 142.
[5] Mann: Medical Sketches of the Campaigns of 1812-'13-'14, p. 236.
[6] Ashburn: History of the Medical Department of the United States Army, pp. 29, 30.

James C. Bronaugh, William Henry Brown, Thomas Lawson, William Newton Mercer, George Balfour, Edward Conrad, J. M. Daniel, David C. Ker, William H. Buckner, Marcus C. Buck, Pryor Quarles, Thomas Triplett.[7] Among the surgeon's mates were: Thadden Capoon, Cornelius Baldwin, John Pollard, Joseph Berry, Lewis W. Bailey, Stephen Sutton, Edward Purcell, Thomas Byone, William T. Cocke, Carter Edmonds, David M. Wharry, Samuel M. Griffith, Robert Stark, Thomas Borland, William A. Dandridge, William W. Southall, James Stephenson, Hugh W. Huston, Henry Brundidge, William E. Horner, L. R. Robinson, Charles Gignillat, Hugh F. Rose.[8]

An impressive number of Virginia doctors rendered service to their country in the militia. Attached to the First Virginia Regiment were Surgeons Charles Morris,[9] David Walker,[10] James Henderson,[11] and Henry Curtis, and Surgeon's Mates William R. McCaw, —— Morgan, John Bragg, and Nicholas Scherer; to the Second Regiment, Surgeons Lewis Hansford, Henry S. Fisher, and Robert P. Archer, and Surgeon's Mates Thomas R. Fisher, William A. O. Brown, and John Hodges; to the Third Regiment, Surgeon James B. Southall,[12] and Surgeon's Mate George Wilson; to the Sixth Regiment Surgeon A. Brockenbrough, and Surgeon's Mate James H. Noel; to the Seventh Regiment, Surgeon Benjamin P. Watkins, and Surgeon's Mates John Crouch, Joseph R. Harris, Reuben D. Palmer, and George W. Vaughan; to the Eighth Regiment, Surgeon Andrew Kean, and Surgeon's Mates James Minor, J. W. Royster, and T. R. Morris; to the Ninth Regiment, Surgeon John Hoskins, and Surgeon's Mate Moore G. Fauntleroy; to the Sixteenth Regiment, Surgeons Richmond Lewis and William Brown, and Surgeon's Mate James B. Wallace; to the Ninteenth Regiment, Surgeon John Adams, and Surgeon's Mates Thomas Massie and John Hayes; to the Twentieth Regiment, Surgeon's Mate James D. Moseley; to the Twenty-first Regiment, Surgeon James Dabney, and Surgeon's Mates William Wiatt and Thomas Whiting; to the Twenty-third Regiment, Surgeon Abner Crump; to the Twenty-fifth Regiment, Surgeons W. J. Quessenberry and Manus Rowan, and Surgeon's Mates George Fitzhugh and Benjamin Sedwrick; to the Twenty-ninth Regiment, Surgeon's Mate Joseph Blunt;[13] to the Thirtieth Regiment, Surgeon's Mate George W. Baylor; to the Thirty-sixth Regiment, Surgeons Thomas Thornton and John Spence, and Surgeon's Mates John Bronaugh,

[7] Jordan MS., p. 710.
[8] Jordan MS., p. 710.
[9] Listed also as Surgeon to the Seventy-fourth Regiment.
[10] Listed also as Surgeon to the Thirty-ninth Regiment.
[11] Listed also as Surgeon to a squadron of Dragoons.
[12] Listed also as Surgeon to the Twenty-ninth Regiment.
[13] Listed also as Surgeon's Mate to the Seventy-first Regiment.

Peyton Narvell and David Davis; to the Thirty-seventh Regiment, Surgeons Joseph Bayse and Mottram Ball, and Surgeon's Mates John McAdam and Thomas Ball; to the Thirty-ninth Regiment, Surgeon's Mate John Gilliam; to the Forty-first Regiment, Surgeon's Mate Horace Wellford; to the Forty-fifth Regiment, Surgeons Benjamin H. Hall and Alexander Fitzhugh, and Surgeon's Mates William Buchanan and Thomas F. Knox; to the Fifty-second Regiment, Surgeon William M. Massey, and Surgeon's Mate John F. Christian; to the Sixty-first Regiment, Surgeon Seth Shepherd, and Surgeons' Mates Bert Gayle and William Taliaferro; to the Sixty-second Regiment, Surgeon Ashley Davis;[14] to the Sixty-eighth Regiment, Surgeons Philip Smith and Alexander Galt, and Surgeon's Mates James C. Madison, Edmund S. Briggs and Robert P. Walker; to the Seventy-first Regiment, Surgeon Charles H. Graves, and Surgeon's Mates John Pretlow and Fred B. Power; to the Seventy-fourth Regiment, Surgeon's Mate Joseph M. Sheppard; to the Eighty-third Regiment, Surgeons Tingnal Jones and John Manlove, and Surgeon's Mate John C. Pegram; to the Ninety-second Regiment, Surgeons Thomas K. Ball and James K. Ball, and Surgeon's Mates Charles Carter and James Gibson; to the Ninety-ninth Regiment, Surgeon George Scherer, and Surgeon's Mate Peter Hack; to the One Hundred and Ninth Regiment, Surgeon George D. Nicholson, and Surgeon's Mate G. W. McIntire; to the One Hundred and Eleventh Regiment, Surgeon Charles S. Collins, and Surgeon's Mates Nathaniel W. Clopton and Robert Murphy; to the One Hundred and Fifteenth Regiment, Surgeon Samuel Colton, and Surgeon's Mate George Winder; to the Second Elite Corps, Charles City Court House, Surgeon P. B. Tindall; to the Detachment at Smithfield, Surgeon John H. Purdie; to the Flying Camp under Colonel James McDowell, Surgeon John Floyd, and Surgeon's Mate Hardin Massie; to the Division under Major General Pegram, Hospital Surgeon John B. Strachan, and Hospital Mates John Field, John Pegram, John Roane; to the First Corps d'Elite, Army of Virginia, under Thomas Mann Randolph, Surgeon George Watson, and Surgeon's Mates James Murray Morris, John Young Stockdale and John Randolph.[15]

There was at least one military hospital in Virginia, known as the Camp Holly Spring Hospital. In October 1813 it was caring for a number of sick soldiers. The "Hospital Department" was located at Richmond, and Surgeons Philip Thornton, Micajah Clark, and Meredith Fox were attached to it. The

[14] Listed also as Surgeon to the Detachment at Fort Powhatan.
[15] Pay Rolls of Militia Entitled to Land Bounty, published in Richmond in 1851. Muster Rolls of the Virginia Militia in the War of 1812, Richmond, 1852.

surgeon general for the "Detachment under the Governor for the defense of the State" was James Jones.[16]

II. THE MEXICAN WAR

The fighting with Mexico which began in April 1846 and terminated in February 1848 found the medical department of the United States utterly unprepared. The medical corps consisted of one surgeon general, twenty surgeons, and fifty assistant surgeons. This force was later increased by fourteen regular officers and forty-eight volunteer officers. The surgeon general was a Virginian, Thomas Lawson. He accompanied General Winfield Scott, also a Virginian, in the campaign against Mexico City, displayed great personal gallantry and was breveted brigadier general. The campaigns were conducted in a hot country with raw troops, and sickness was far more fatal than the bullets of the enemy. Out of the 100,000 men engaged, 11,000 died of sickness, while only about 1,500 succumbed to wounds. There was practically no hospital equipment, though a large part of the force was at one time or another in the hospitals. In the summer of 1847 General Scott reported three thousand sick at Vera Cruz, Jalapa, and Pueblo.[17]

Virginia's contribution to the forces called for by the President consisted in the organization of one unit, the First Regiment of Virginia Volunteers. On November 18, 1846 Governor William Smith called for volunteers, and a month later the troops began to assemble at the rendezvous in Richmond. Officers of the United States army, including a medical officer, inspected the men before they were mustered into service. On January 1, 1847 Colonel Hamtramck arrived in Richmond to take charge of the regiment, and by the first of March all ten companies had sailed from Fortress Monroe for Mexico.

Complications arose over the appointment of a medical officer for the regiment. "Dr. C. J. F. Bohannon, of Richmond, has been appointed by the President of the United States, Surgeon of the 1st Regiment of Virginia Volunteers," announced the Richmond *Enquirer* on January 1. Shortly afterwards the President withdrew his nomination of Dr. Bohannon, substituting that of Dr. William H. I'Anson of Petersburg. A controversy developed, in which rivalry between Richmond and Petersburg apparently played a part. Dr. Bohannon's

[16] Muster Rolls of the Virginia Militia in the War of 1812. Micajah Clark of the "hospital department" was born in Albemarle County in 1788, was apprenticed to Dr. John Adams in Richmond, and received his M.D. at the University of Pennsylvania in 1811. Dr. Physick called him a "born physician." He acquired a large practice in Richmond, where he died in 1849. (Transactions, American Medical Association, v. 31, p. 1031.)

[17] Ashburn: History of the Medical Department of the United States Army, p. 59.

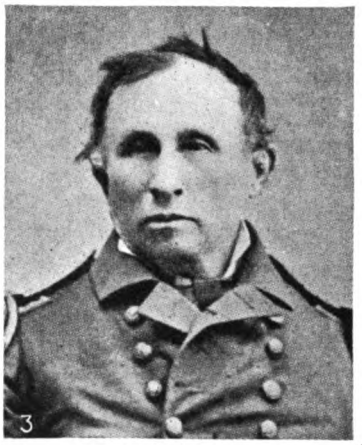
friends charged that pressure was exerted to change the President's nomination after Bohannon had closed his office preparatory to leaving for Mexico. I'Anson was accused of being the "little doctor . . . who opened an office in Richmond for a few months, and then, in utter despair of doing anything in his profession, (having no patients to leave,) joined Captain Robinson's Company of Volunteers, as a private." Bohannon, though also a young man, was said to have had more experience and to be better known. The advocates of I'Anson claimed that since Petersburg had raised more volunteers than Richmond she was entitled to the appointment. They pointed out that though I'Anson was the son of a poor man he had been educated at William and Mary College, spent three years at the University of Virginia, and received his M. D. degree at the University of Maryland.[18] Moreover, he was declared to have a "vigorous mind" and to be "an unassuming and diffident young man." I'Anson's appointment was apparently sustained. One of the volunteers, writing home the latter part of February, complained of a diet of "hard crackers and salt pork" and the insanitary condition of the privates' bunks, which were full of lice; but added that "Dr. I'Anson has been appointed surgeon of the detachment of the regiment on board. He is very much liked." John Miller Bell received the appointment as assistant surgeon.[19]

In March another volunteer, writing from Point Isabel, assured his family that the men had kept well on the voyage, there being "no sickness, except mumps and sea-sickness." About the same time the papers announced that the President "has conferred the appointment as Surgeon to the Virginia Regiment on Dr. James L. Clarke of Gloucester County, who is represented to be a young gentleman of fine talents, and in every way qualified."[20]

III. THE WAR WITH SPAIN

The conflict with Spain, occupying only a few months in the spring and summer of 1898, was carried on in Cuba, Porto Rico, and the Philippines. All told, a little more than 250,000 men were called to arms. Most of them, however, remained in this country. It was another case of being unprepared for war. Particularly pathetic was the inadequacy of the medical department, which had no supplies in reserve and only 177 regular officers. The war once more demonstrated the value of an adequate medical force and the importance of military

[18] Richmond Daily Whig, Feb. 6, 22, 1847, letters signed "Jeffersonian Democrat." Richmond Enquirer, Feb. 19, 1847, letter signed "Vindex."
[19] Richmond Enquirer, Feb. 5-22, 1847. Heitman's Historical Register gives the name as "James M. Bell."
[20] Richmond Enquirer, March 12, 1847.



VIRGINIANS IN THE MILITARY MEDICAL SERVICE OF THE UNITED STATES
1. Jonathan Cowdery, U.S.N. 2. James Markham Marshall Ambler, U.S.N.
3. G. R. B. Horner, U.S.N. 4. Robert Howe Little, U.S.A.
5. Robert Archer, U.S.A.

WALTER REED. REED'S BIRTHPLACE IN GLOUCESTER COUNTY, VIRGINIA.

hygiene. Again there were few deaths from injuries and wounds compared to the enormous mortality from sickness. The admission rate from disease was twenty times that for injuries. Malaria and diarrhœa accounted for more than half the admissions, and typhoid fever, the great scourge of this war was definitely diagnosed in 13,770 cases with 906 deaths. Walter Reed thought that at least that many more cases of typhoid had been incorrectly diagnosed as malaria and other fevers. Yellow fever, measles, and smallpox also took their toll.[21]

There were four large concentration camps in this country—Thomas, Cuba Libre, Meade, and Alger. Camp Alger was in Virginia near Dun-Loring, Fairfax County. Here about 20,000 troops, including the Third Virginia Regiment, were encamped during the war. Artesian wells and favorable drainage were assumed to be adequate protection against the outbreaks of the usual diseases of camp life, but overcrowding, the open disposal of garbage and excreta, and ignorance of vaccination and the value of screening soon exacted fearful tolls—4,083 cases of malaria and approximately 2,700 cases of typhoid, with 322 deaths. The Third Virginia Regiment with a mean strength of 1,141 men had seventy cases of typhoid with thirteen deaths.[22] Major William M. Smith of Alexandria was surgeon and Captains William E. Anderson of Farmville and Frank Camm of Lynchburg were assistant surgeons of this regiment, which never saw active service. Besides Camp Alger there were other concentrations of troops in Virginia. Soldiers were assembled around Richmond in the early months of the war, and here, as well as at Fortress Monroe and Norfolk, the care of the sick was an important problem.

On April 25, 1898 the Secretary of War notified Governor James H. Tyler that three regiments would be needed from the state of Virginia and designated Richmond as the place of rendezvous. The governor proceeded to select thirty-six companies from the four regiments of the national guard and to form them into three new regiments of twelve companies each. They were known as the Second, Third, and Fourth Virginia Regiments. A little later a colored regiment was recruited from Richmond, Norfolk, and Petersburg and designated as the Sixth Virginia Regiment. On the 27th of April the adjutant general notified the governor that "medical officers before being mustered in the service of the United States, will be required to pass satisfactory examinations as to character and professional ability before a board of Army or civilian surgeons, or both, designated by the Surgeon-General. An Army surgeon has been

[21] Ashburn: History of the Medical Department of the United States Army, pp. 161-223.
[22] Reed and others: Abstract of Report on the Origin and Spread of Typhoid Fever in United States Military Camps during the Spanish War of 1898, pp. 78-104.

designated to conduct physical examinations for volunteers at each State rendezvous. The Secretary of War requests that you provide two civilian physicians to constitute, with the Army surgeon, a board for carrying out the above provisions." Charles V. Carrington of Richmond and W. S. Sayers of Norfolk were appointed to serve with Major George W. Adair, M. C., U. S. A., who was designated chief medical examiner. The medical officers of the Virginia regiments were examined on May 4, and began at once the examination of the troops.[23] By May 22 all the regiments were assembled at Camp Lee on the State Fair Grounds on West Broad Street,[24] except six local companies which were quartered in the Richmond armories. In spite of inadequate equipment—there were only six hospital tents—the regiments broke camp about the first of June. The Second Regiment entrained for Jacksonville, Florida, where as a part of the Seventh Army Corps under Major General Fitzhugh Lee it remained inactive until mustered out in December. In the meantime it had developed 152 cases of typhoid fever, seventeen of which died. Its medical officers were Major Charles E. C. Peyton of Pulaski, surgeon, and Captains Richard G. Simmons of Roanoke and Robert E. Caldwell of Wytheville, assistant surgeons. The Fourth Regiment left for Jacksonville on June 5 and was stationed at Camp Cuba Libre. It was also a part of the Seventh Army Corps. Its medical officers were Major Charles R. Vance of Norfolk, surgeon, Captains George P. Peed of Portsmouth and William L. Old of Norfolk, assistant surgeons. Two hundred and thirty-one cases of typhoid fever developed in this regiment, and there were twenty-one deaths. This was the only Virginia unit to reach Cuba. It was sent to Havana in December, four months after the peace protocol was signed, and was not mustered out until the following April. The Sixth Regiment, with Lieutenants Charles R. Alexander of Petersburg and Allen J. Black of East Radford, assistant surgeons,[25] was sent to Camp Poland, Tennessee, and became a part of the Third Division of the First Army Corps. It was mustered out in 1899, having lost none of its personnel from sickness.[26]

The total mortality for the 5,326 Virginia troops who served during the war was seventy. Of these, sixty-four died of disease. Fifty-one succumbed to typhoid fever, one to tuberculosis, four to cerebro-spinal meningitis, three to pneumonia, and one to malaria.[27]

[23] Among others, Arthur Jordan, M.D., of Richmond, gave up his practice and enlisted.
[24] A site now occupied by the Stephen Putney Shoe Factory.
[25] Dr. Alexander was a negro, and probably Dr. Black was also.
[26] Two were murdered.
[27] Report of the Adjutant General of Virginia for the years 1898 and 1899.

We entered the war ignorant of many of the first principles of military hygiene. The relation of the mosquito to malaria and yellow fever was not known, and many of the important factors relating to the spread of typhoid fever were yet to be discovered. Notwithstanding, valuable public health lessons were learned, which had far-reaching effects on the progress of medicine. The two most notable medical advances that came out of the war were largely the work of Walter Reed of Virginia. They were the study of typhoid fever in military camps by a government commission which he headed in 1898, and the solving of the yellow fever problem by another commission over which he presided in 1900.

CHAPTER XV

VIRGINIA DOCTORS IN THE MILITARY AND PUBLIC HEALTH SERVICE OF THE UNITED STATES

A SURPRISINGLY large part of the medical history of Virginia is in one way or another connected with the military establishments. The army and navy have proved attractive to many Virginians, and a considerable number of graduates from Virginia medical schools have from time to time passed the rather stringent examinations required for admission to the service.

A tablet in the Naval Medical School bears the words: "Duty is Stronger than Love of Life." It commemorates a stirring and tragic career in the medical department of the navy. James Markham Marshall Ambler, M. D., U. S. Navy, was born in Fauquier County, Virginia, December 30, 1849.[1] His father was Dr. Richard Cary Ambler, a man of good family and fine literary taste. His mother was related to Chief Justice Marshall and to Robert Morris. Studying first at Washington and Lee, young Ambler graduated in medicine from the University of Maryland in 1870. He was commissioned assistant surgeon in the navy in 1874. Service on several warships followed, with advance in rank. Then came an unusual and dangerous commission. He was "requested" by the navy department to volunteer for Arctic service—a request which other officers had declined. It soon developed that he was to be the sole medical officer of the *Jeannette,* a vessel bound for Arctic exploration under the command of Lieutenant De Long. With fine spirit the tall, broad-shouldered young officer set about preparing himself for his responsibility and systematically read all he could find about the health hazards of such expeditions.[2]

On July 8, 1879 the *Jeannette* sailed. By September she was imprisoned in the Arctic ice pack. Two years later, still in the frozen north, she met a disastrous fate. On June 12, 1881 she was crushed, and officers and crew, thirty-three in all, were forced to leave her. Five hundred miles of ice, open sea, and uncharted wilderness lay ahead. Dividing into three companies, for three months they dragged boats and sleds over the ice and braved the rough seas of the great north in a desperate effort to reach civilization. Then a storm separated the boats. One cutter was never heard of again. The whaleboat

[1] Kelly and Burrage: Dictionary of American Medical Biography, p. 23.
[2] Article on Ambler, by J. C. Wise, M.D., The Military Surgeon, v. 18, p. 363.

commanded by George Melville, who afterwards wrote an account of the expedition, rode out the storm and succeeded in finding succor among the natives well south of Cape Barkin. The other cutter, carrying De Long and Ambler, was driven westward and on September 13 the survivors were forced to land on the Lena Delta in northern Russia. For nearly a month they fought their way south, each day taking its toll of the suffering men, until, provisions exhausted and strength gone, they lay down to await their fate. The next year when Melville's party, returning, found the bodies of his gallant companions, a worn and water-marked diary wrapped in a long woolen muffler was discovered wedged under Ambler's waistband. It may still be read, a simple record of high courage in line of duty.[3]

Ambler's service and devotion to duty is the high note in the expedition. Due to his foresight the *Jeannette* was the first Arctic ship to escape the horrors of scurvy, for he had provided many barrels of lime juice. He quickly discovered lead poisoning among the crew, accurately attributing it to food preserved in soldered cans. The distillation of sufficient drinking water was only one of his many problems. Frequent analyses showed that melted ice and snow, however carefully collected, contained too much salt to be used for drinking. Into his busy hours Ambler found time to crowd the study of the morphology and crystallization of snow. On the weary retreat he was cheerful, constantly administering to the sick and injured, taking his turn at dragging the provisions. At the last encampment, when De Long sent forward two men to seek assistance, Ambler chose to remain with the helpless and dying, writing in his diary, "The Capt. gave me the option of going ahead myself, but I thought my duty required me with him & the main body for the present."[4]

Ambler's heroism in the navy is matched in the army by Walter Reed's discovery of the mode of transmission of yellow fever in Cuba in 1900. Before Reed's work yellow fever had long been epidemic in many parts of the world, including our own Atlantic seaboard, and had exacted a fearful toll of human life. Many theories were held in regard to it, one school maintaining that it was contagious, another arguing just as vehemently that it was not. Poorly ventilated, crowded, and filthy places were shunned, for moisture, heat, and the decomposition of organic material were supposed to have an important bearing upon the distribution of the disease. It was believed that the contagion was spread by fomites—furniture, clothing, bedding. Then the theory of the bacterial cause of the disease was advanced, and Guiseppi Sanarelli in 1897 an-

[3] U. S. Naval Medical Bulletin, v. 11, p. 183.
[4] Ambler's Diary, published in full in the U. S. Naval Medical Bulletin, v. 11, p. 183.

nounced the discovery of a "specific cause," called by him the *bacillus icteroides.* The relation of the mosquito to malaria was definitely proved in 1898, and Dr. Carlos J. Finlay of Havana, Cuba, had read in 1881 a paper entitled *The Mosquito Hypothetically Considered as the Agent of Transmission of Yellow Fever.* This was the state of our knowledge when Walter Reed began his studies.

He began by showing that the *bacillus icteroides* is a strain of the bacillus of hog cholera and, though occasionally recovered from yellow fever patients, has no etiological relation to the disease. Then an outbreak of yellow fever occurred among United States troops in Havana, and Reed was appointed to head a commission of medical officers to study the disease.[5]

He had already, through observation of a local epidemic, conjectured that some insect, possibly the mosquito, was the carrier of the contagion. The first problem, in his own words, was to discover "the way or ways in which the disease was propagated from the sick to the well." In the first experiment Carroll and Lazear allowed themselves to be bitten by mosquitoes which had previously fed upon patients in the acute stage of yellow fever. Both came down with the disease. Dr. Carroll recovered but Dr. Lazear died. Eleven other persons were then bitten under similar circumstances, but only two contracted the fever.

The next stage of the experiment was carried on under carefully controlled conditions in Camp Lazear and bore convincing proof of the theory Dr. Reed was seeking to establish. Here volunteers for the remaining experiments were kept under strict supervision. Dr. Reed says of this stage of the experiment: "It was now proposed, to attempt the infection of non-immune individuals in three different ways, namely, first, by the bites of mosquitoes which had previously bitten cases of yellow fever; second, by the injection of blood taken during the early stages from the general circulation of those suffering the disease; and third, by exposure to the most intimate contact with fomites. For this purpose . . . two frame buildings each 14 x 20 feet in size were constructed. These buildings . . . were exactly similar, except that one of them, known as the 'Infected Mosquito Building,' was divided near the middle by a permanent wire screen partition and had good ventilation; while the other, designated as the 'Infected Clothing Building,' was purposely so constructed as to exclude anything like efficient ventilation. . . . Both houses were provided with wire screen windows and double wire screen doors. . . ."[6] Infected mosquitoes

[5] These officers were Walter Reed, chairman, James Carroll, Jesse Lazear and Aristides Agramonte.

[6] Kelly: Walter Reed and Yellow Fever, p. 138.

were placed in the Infected Mosquito Building, and on December 5, 1900 the first subject for the experiment was sent in. He was freely bitten by the mosquitoes and three days later came down with yellow fever. The experiment was repeated four times with other non-immunes with similar results. In the Infected Clothing Building blankets, sheets, and clothes, which had been soiled with feces and vomitus of yellow fever patients, were packed in boxes and trunks. On twenty successive nights Acting Assistant Surgeon Robert P. Cooke and two privates, all non-immunes, entered this building, unpacked the boxes, and shook out their contents, sometimes actually wearing the clothes while they slept there. At the end of this trying period all were well and in good spirits.[7]

The final experiment, that of injecting the blood of yellow fever patients into non-immunes, was now also successfully carried out, and all of the subjects upon whom this experiment was tried promptly came down with the disease. Walter Reed had proved his case, and there was no denying the truth of his assertion, "We have succeeded in producing a case of unmistakable yellow fever by the bite of the mosquito."[8] Well he knew the importance of his discovery. Writing to his wife on December 9, 1900 he said, "Rejoice with me, sweetheart, as, aside from the antitoxin of diphtheria and Koch's discovery of the tubercle bacillus, it will be regarded as the most important piece of work, scientifically, during the 19th century."

At the Pan-American Congress, February 4-7, 1901, Dr. Reed summarized his discoveries:

"(1) The mosquito, *C. fasciatus,* serves as the intermediate host for the parasite of yellow fever.

"(2) Yellow fever is transmitted to the non-immune individual by means of the bite of the mosquito that has previously fed on the blood of those sick of the disease.

"(3) An interval of about twelve days or more after contamination appears to be necessary before the mosquito is capable of conveying the disease.

"(4) The bite of the mosquito at an earlier period after contamination does not appear to confer any immunity against a subsequent attack.

"(5) Yellow fever can also be experimentally produced by the subcutaneous injection of blood taken from the general circulation during the first and second days of this disease.

[7] Dr. Cooke, a Virginian now living in Rockbridge County, was awarded by Congress in 1929 a gold medal for his heroic service. Richmond Times-Dispatch, March 23, 1929.
[8] Kelly: Walter Reed and Yellow Fever, p. 140.

"(6) An attack of yellow fever, produced by the bite of the mosquito, confers immunity against the subsequent injection of the blood of an individual suffering from the non-experimental form of the disease.

"(7) The period of incubation in thirteen cases of experimental yellow fever has varied from forty-one hours to five days and seventeen hours.

"(8) Yellow fever is not conveyed by fomites, and hence disinfection of articles of clothing, bedding, or merchandise, supposedly contaminated by contact with those sick with this disease, is unnecessary.

"(9) A house may be said to be infected with yellow fever only when there are present within its walls contaminated mosquitoes capable of conveying the parasite of this disease.

"(10) The spread of yellow fever can be most effectually controlled by measures directed to the destruction of mosquitoes and the protection of the sick against the bites of these insects.

"(11) While the mode of propagation of yellow fever has now been definitely determined, the specific cause of this disease remains to be discovered."[9]

In the subsequent search for the cause of yellow fever the idea of a filterable virus was suggested to Reed in the summer of 1901 by Professor William H. Welch of the Johns Hopkins University, and Dr. Carroll was dispatched to Cuba that same summer to test this theory. His experiments were eminently successful, demonstrating that the blood of yellow fever patients, after passing through a Berkefeld filter, is still capable of conveying the disease when injected into a non-immune.[10]

The practical effect of Walter Reed's work may be summarized in his own words: "I may say that counting from the day when they [the new sanitary regulations] were put into force, *viz.,* February 15, 1901, Havana was freed from yellow fever within ninety days; so that from May 7 to July 1, a period of fifty-four days, no cases occurred. . . ." Between the years 1853 and 1900 there had been recorded in the city of Havana 35,952 deaths from yellow fever.

What was true of Havana was shortly true of all Cuba, Panama, and other yellow-fever-infested areas of the world. General Leonard Wood, who commanded in Cuba after the Spanish-American War, said at a service in honor of Dr. Reed: "I know of no man who has done so much for humanity as Major Reed. His discovery results in the saving of more lives annually than were

[9] Kelly: Walter Reed and Yellow Fever, pp. 161-162.
[10] Kelly: Walter Reed and Yellow Fever, pp. 164-169.

lost in the Cuban War and saves the commercial interests of the world a greater financial loss in each year than the cost of the entire Cuban War."

Walter Reed was a native of Gloucester County, Virginia. The small frame house in which he was born, September 13, 1851, is almost a miniature dwelling of two rooms and a garret. It has recently been restored by the Medical Society of Virginia and is annually visited by many pilgrims who come to honor his name. His parents, Lemuel and Pharaba White Reed, moved with their five children to Farmville, Virginia when Walter was six years old. Here, when he was not going to school to Mrs. Booker, the lad watched the oxcarts bringing in tobacco, played with the older boys about the warehouses, chewed tobacco, suffered the consequences, and acted in every way like most other boys of his age. After the Civil War the Reeds moved to Charlottesville, and Walter was sent to school to Mr. Abbott. At the age of sixteen he entered the University, but after a year's academic work discovered that he would not have the means to finish the regular two-year course. He decided to go into medicine without delay, applied to Dr. Maupin, dean of the medical department, and received permission to try for the degree. There were times when he slept but three or four hours in the twenty-four, so continuously did he apply himself to his studies. It was a hard grind, which only his enthusiasm and stamina could have withstood. Nine months later, in 1869, standing third in his class, he received the coveted degree, the youngest student who ever had done so. His first move was to New York for a year's study at Bellevue Hospital Medical College, where he received a second M. D. After an internship at King's County Hospital, through the influence of Dr. J. C. Hutchison he became one of the inspectors on the Brooklyn Board of Health. In July 1874 he wrote, "I have about made up my mind to make a strenuous effort to enter the Medical Corps of the United States Army." To pass the difficult army examinations given at that time Reed burnt the midnight oil and paid for it by weeks of sickness, but when the examinations came off he passed with flying colors, and in June 1875, with the rank of first lieutenant, he reported at his first station, Willett's Point, New York. The following April he married Miss Emilie Lawrence of Murfreesboro, North Carolina, and two weeks later was sent to Arizona. There for fourteen years he lived the life of a post surgeon on the western frontier. It was 1890 before he began the work that had real bearing on his claims to fame. In that year he was transferred to the East and assigned to Johns Hopkins Hospital for a year's study. His interest soon centered in the pathological and bacteriological laboratories, where he took systematic courses under Dr. Welch. The marvelous bacteriological progress of the preceding

decade had given great impetus to the investigation of bacteriological problems, and Reed completed his year by research of his own directed at determining the nature and cause of the so-called lymphoid nodules found in the liver in typhoid fever. The results of this work, in which he demonstrated that the small foci consisted of dead liver cells, were published in the *Reports of the Johns Hopkins Hospital* and were declared by Professor Welch to be "a valuable contribution." This taste of research and scientific medicine changed Reed's whole career, for although he was sent back to Dakota for the next two years he returned in 1893 to become curator of the Army Medical Museum and professor of bacteriology in the United States Army Medical School. From this time on he became a frequent contributor to medical literature, reporting work upon the contagiousness of erysipelas, the cholera spirillum, the parasite of malaria, serum diagnosis of typhoid fever, and splenic leukemia.

Reed returned to Washington in February 1901 after his work on yellow fever in Cuba and took up his duties as professor at the Army Medical School and in the Columbian University. Hard work and criticism now began to tell upon him. He wore the expression of a sick man. In the latter part of November 1902 acute appendicitis developed with alarming rapidity, terminating his life on November 22. He was buried with military honors at Arlington.[11]

Henry Rose Carter (1852-1925) was a sanitarian, whose life was devoted chiefly to the study of yellow fever and malaria. His discovery of the extrinsic incubation of yellow fever preceded Reed's demonstration of the mosquito as a carrier. In the public health service he was transferred from the Ship Island Quarantine Station on the Gulf of Mexico to take charge of several yellow fever outbreaks in the South, and between 1899 and 1900 he instituted the quarantine system in Cuba. He was director of hospitals in the Canal Zone (1904-1909), served on a yellow fever commission to Central and South America (1916), was in charge of the malarial work of the United States Public Health Service (1917-1919), and acted as sanitary adviser to the Peruvian government (1920-21). He wrote much concerning impounded waters, yellow fever, and malaria, and in 1904 Sir Ronald Ross presented his name for the Nobel Prize.

Carter was born in Caroline County, Virginia, August 25, 1852, the son of Emma Caroline Coleman and Henry Rose Carter. He was graduated in engineering from the University of Virginia in 1873 and in medicine from the Uni-

[11] Kelly: Walter Reed and Yellow Fever, p. 245.

versity of Maryland in 1879. He entered the United States Public Health Service, rising to the rank of assistant surgeon general in 1915.[13]

From the heroic careers of Ambler and Reed and the useful services of Carter we turn to a Virginian whose genius was chiefly in the field of administration. Thomas Lawson, fifty years in the medical service of the United States army, was for twenty-five years surgeon general of the department. General Order No. 23, published at the time of his death, described him as "full of military fire, which not even the frost of age could quench, and a zeal for the honor of his profession which made his administration of the Medical Department a model of inflexibility, efficiency and economy."[13]

Thomas Lawson was a son of Thomas and Sarah Robinson Lawson. He was born in Virginia, August 29, 1789, and died at the house of Dr. Daniel C. Barraud in Norfolk, May 14, 1861.[14] His military career began in 1809 when he entered the service as a surgeon's mate in the navy. Four years later he transferred to the infantry. In the reorganization of the medical department which occurred in 1821 he became an army surgeon, senior grade. From this time until his appointment as surgeon general in 1836 he was more often found serving in the capacity of line officer than in that of surgeon. He went with General Winfield Scott to the Mexican War and was breveted brigadier general on the field for gallantry, the first medical officer to receive that rank. At the time of his promotion to the head of the department he was acting as medical director of Northern troops destined for the Florida War.

He wrote of himself in 1840: "I have been twenty-six or more years in the military service of my country, and very generally with troops on the frontiers and in the field.

"I have been on the theatre of immediate action in every war in which the country has been engaged within my period of service, whether with a civilized or savage enemy, except that with the Black Hawk, and then I volunteered my services for the field, but could not obtain permission to leave my station.

"I have acted as quartermaster and as adjutant, and have been for months at a time, in command of a company of men in the regular army. I have also commanded a battalion and a regiment of men in the volunteer service, and have led them to the theatre of war."[15]

[13] Kelly and Burrage: Dictionary of American Medical Biography, p. 203.
[13] Ashburn: History of the Medical Department of the U. S. Army, p. 66.
[14] Tyler: Cyclodepia of Virginia Biography, v. 2, p. 207. Kelly and Burrage: Dictionary of American Medical Biography, p. 724.
[15] Ashburn: History of the Medical Department of the U. S. Army, p. 55.

When he became surgeon general he at once set about the rejuvenation of the long-neglected medical department, striking out boldly for the things it needed —rank equal to that of other officers, better pay, appropriate uniforms, and a definite status. All of his requests were eventually approved by Congress. Under him medical officers were allowed to engage in outside medical practice, and in 1850 he inaugurated the custom of sending delegates to the American Medical Association. He published the following works: *Report on Sickness and Mortality, United States Army, 1819-1839,* and *Meteorological Register 1826-1830, and Appendix for 1822-1825.*

Although born at Sandisfield, Massachusetts, the son of a New England physician, Jonathan Cowdery (1767-1852) lived forty-five years in Norfolk, Virginia, died, and was buried there. From his father he probably received a large part of his medical training, and he appears to have attended lectures for two winters at Dartmouth. An early marriage, saddened by the death of his wife, preceded his entrance into the navy as surgeon's mate on January 1, 1800. He made his first cruise to the West Indies on the *Philadelphia* with Commodore Decatur. In 1803 he sailed again on the *Philadelphia,* now commanded by Captain William Bainbridge and destined for service against the Barbary States in the Mediterranean. In October, while blockading Tripoli, the ship ran aground and was forced to surrender. Among the captives was Dr. Cowdery. The account of his experience is told in a diary which appeared in book form in Boston in 1806 under the title *American Captives, or Dr. Jonathan Cowdery's Journal in Miniature.* It is an entertaining and informing record of nineteen months' detention by a cruel enemy. Because of his profession and the service he was able to render he was allowed the freedom of the town and became the personal physician of the Bashaw and his family and slaves. When peace was concluded in January 1805, he returned home to continue a long career in the naval medical service, less eventful but none the less honorable. He was promoted to the grade of surgeon in 1807 and transferred to Norfolk, which he henceforth called his home. Here he spent "the fore part of every day visiting and prescribing for the sick and Lame in the Hospital Vessel and in the Navy Yard, etc. My Mates and attendants," he wrote, "put up the Medicine and do the other Duty of the Medical Department, the afternoon and evenings I spend in Reading, Writing and among my new friends and acquaintances in Norfolk and in Portsmouth."[16] A second marriage in 1808 brought with it the desire for a quiet domestic life and, though interrupted by occasional orders to

[16] Pleadwell, F. L., and Kerr, W. M.: Jonathan Cowdery, United States Naval Medical Bulletin, 1922, v. 17, p. 78.

sea, shore duty at Gosport Navy Yard occupied him for many years. In 1814 he wrote: "We have about 700 men in the service, and I have had the good fortune not to lose but one man since I had the medical charge of them, which is a year last spring."[17] The small salary he received as a naval surgeon was doubtless augmented by private practice for, like many other physicians of the period, he operated a drug store in Norfolk.[18] The loss of one eye from ophthalmia contracted in Tripoli, increasing ill health, and a growing family were legitimate reasons for the shore duty which he continued to prefer. At the age of sixty-three, now senior medical officer of the navy, he was ordered to join the Mediterranean fleet. In 1850 he was still in the service, an old man, acting as recruiting medical officer in Norfolk. At his death, November 20, 1852, the Norfolk *Beacon* observed, "Few men have borne a more unblemished character or been held in such high and universal esteem for all the qualities of head and heart that constitute the efficient officer and worthy citizen."

Thomas Ewell (1785-1826), navy surgeon and investigator, was born in Prince George County, May 22, 1785, the son of Colonel Jesse Ewell and the brother of Dr. James Ewell. His study of medicine, begun under Dr. Weems of Georgetown, was completed at the University of Pennsylvania in 1805. His thesis was remarkable for its original and experimental work upon the function of the stomach. He terminated his career in the navy in 1813 to take up the practice of medicine in Georgetown. In spite of the fact that his attempt in 1820 to establish a general hospital in Washington came to naught, it received the approval of at least one national magazine and makes it evident that he held views far in advance of his times. His collected papers were published in a single volume in Philadelphia in 1819. He died in Virginia in May 1826.[19]

James Duncan Gatewood, born in Halifax County, Virginia, May 24, 1857, is remembered chiefly as a naval sanitarian. He graduated in medicine from the University of Virginia in 1879 and entered the navy. In 1911 he became medical director and later was in charge of the naval hospital in Washington, as well as of the United States Naval Medical School. During the World War he held important positions and retired in 1921 with the rank of commodore. His works on hygiene were highly regarded. He was the author of *Notes on Naval Hospitals, Medical Schools and Training Schools for Nurses,* 1893, and *Naval Hygiene,* 1909. He was a delegate to the International Sanitary Con-

[17] Pleadwell, F. L., and Kerr, W. M.: Jonathan Cowdery, United States Naval Medical Bulletin, 1922, v. 17, p. 81.
[18] Norfolk Gazette, March 1813.
[19] Kelly and Burrage: Dictionary of American Medical Biography, p. 393.

ference of American Republics in Mexico City in 1907. He died February 27, 1924.[20]

Another noted sanitarian was Agrippa Nelson Bell, a native of Northampton County, Virginia, who was the first person to employ steam in the disinfection of ships. Bell's discovery resulted from experiments on the vessels *Vixen* and *Mahones* off Tuxpan, Mexico, in 1848, and marked a new era in marine sanitation.

Bell was born August 3, 1820, son of George and Elizabeth Scott Bell. His father died early, and the son tried farming and clerking before taking up medicine, which he studied first with George C. Blackman, then at the Tremont Street Medical School, Boston, and finally at Harvard Medical School and Jefferson Medical College, graduating from the latter in 1842. After practising for a while at Frankfort, Virginia, he took the examination for the naval service and was commissioned assistant surgeon in 1847. From this time on his life was a busy one, including service aboard the *Saratoga* and other vessels and in the yellow fever hospital on Salmadina Island during the Mexican War and two years on the flagship *Germantown* off the coast of Africa. During this period he contracted yellow fever but fortunately recovered. In 1855 he resigned from the navy and engaged in private practice in Brooklyn. In the yellow fever epidemic of the next year he volunteered for service at the marine hospital on Staten Island. After this he occupied several important positions, was a member of the National Quarantine and Sanitary Conventions, 1857-1860, medical superintendent of the floating hospital in New York harbor during the Civil War, supervising commissioner of quarantine, New York, 1870-73, and an inspector of quarantine for the Atlantic coast in 1879. He drafted the law and designated the site for the New York quarantine establishment. He founded a public health publication, *The Sanitarian,* in 1873 and was the author of *Knowledge of Living Things,* 1860, and *Climatology and Mineral Waters of the United States,* 1885. He contributed many articles to medical literature, winning several prizes for essays. His death occurred in Brooklyn, October 16, 1911.[21]

Walter Drew McCaw (1863-) native of Richmond, graduate of the Medical College of Virginia and the College of Physicians and Surgeons in New York, has occupied some of the most important positions in the army, among them that of chief surgeon of the Philippines and chief surgeon of the American Expeditionary Force, October 1918 to July 1919. As librarian of the surgeon general's office, as professor of military and tropical medicine in the

[20] Kelly and Burrage: Dictionary of American Medical Biography, p. 456.
[21] Kelly and Burrage: Dictionary of American Medical Biography, p. 88.

Army Medical School, and as author of *Tropical Surgery* in Keene's *Surgery*, he has shown his literary gifts. He has received numerous decorations from foreign governments. After attaining the rank of brigadier general he retired from the army in 1927.

Hugh S. Cumming, Surgeon General of the United States Public Health Service, was born in Virginia in 1869. He was educated at the University of Virginia and at the University College of Medicine at Richmond. After years in the Public Health Service he was made surgeon general in 1920. He represented the United States in the Cannes Conference and is a member of many learned societies.

CHAPTER XVI

BOOKS AND AUTHORS

I

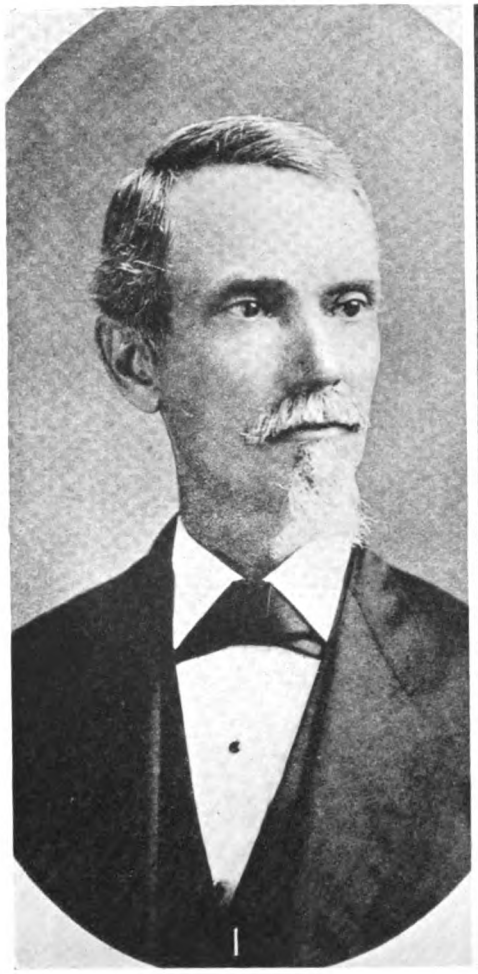
VIRGINIA has produced two humorous writers, William Byrd, a layman who wrote a great deal about medicine, and George William Bagby, a physician, who wrote nothing about medicine. Bagby was born in Buckingham County on August 13, 1828, the son of George Bagby, a Lynchburg merchant, and Virginia Young Evans. His mother's untimely death sent the boy at an early age to live with relatives in Buckingham, Cumberland, and Prince Edward Counties. At ten he was enrolled at Edgehill School, Princeton; at fifteen he became a freshman at Delaware College; at eighteen he began the study of medicine at the University of Pennsylvania. Three years of assiduous work followed. He graduated with a thesis entitled *Hysteroptosis* and returned to Lynchburg, "the happy owner of a diploma in a green tin case, and the utterly miserable possessor of a dyspepsia which threatened my life."[1] He began the practice of his profession "in front of a tenement that then stood on the site of the now stately Opera House of that city. But it may be doubted if really he ever attended half a dozen cases,"[2] for although he was cordially enough received by the physicians of the town he displayed little interest in his profession and shortly gave it up entirely. It was a plain case of a temperamental misfit. Years afterwards in *A Piece About Doctors,* in which he paid high tribute to both county and city physicians, he declared: "God knows that both classes have a hard enough time. For nothing in this world would I undertake the labor or responsibility of either of them. Fact is, I couldn't; it is not in me, or anywhere about me."[3]

The young refugee from medicine was soon at home as coeditor of the Lynchburg *Express.* In the columns of this paper, as well as in the Lynchburg *Virginian,* his writing was distinguished by those homely comparisons and unexpected flashes of satire which characterized all his literary work.

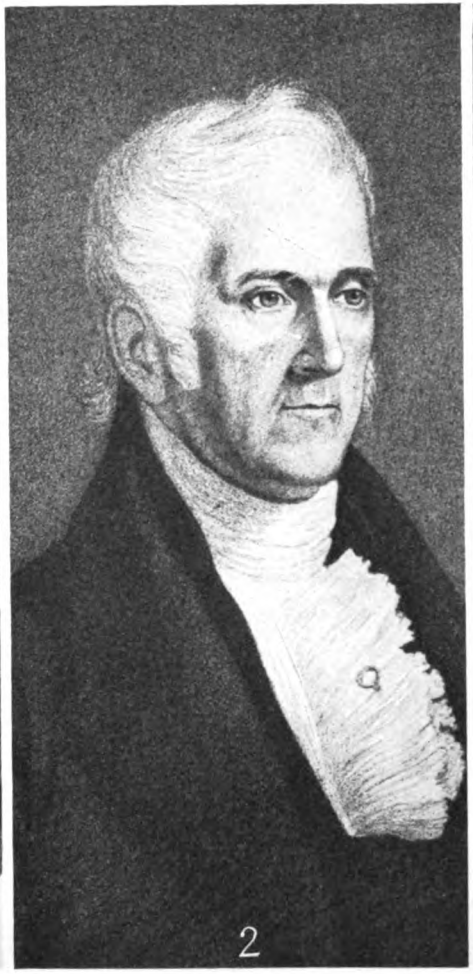
Failing health and fifteen months of recuperation in Prince Edward County did not prevent his writing sketches and essays. *My Wife and My Theory*

[1] King: Dr. George William Bagby, pp. 1-14.
[2] Bagby: The Old Virginia Gentleman and Other Sketches, p. xix.
[3] Bagby: The Old Virginia Gentleman, p. 285.

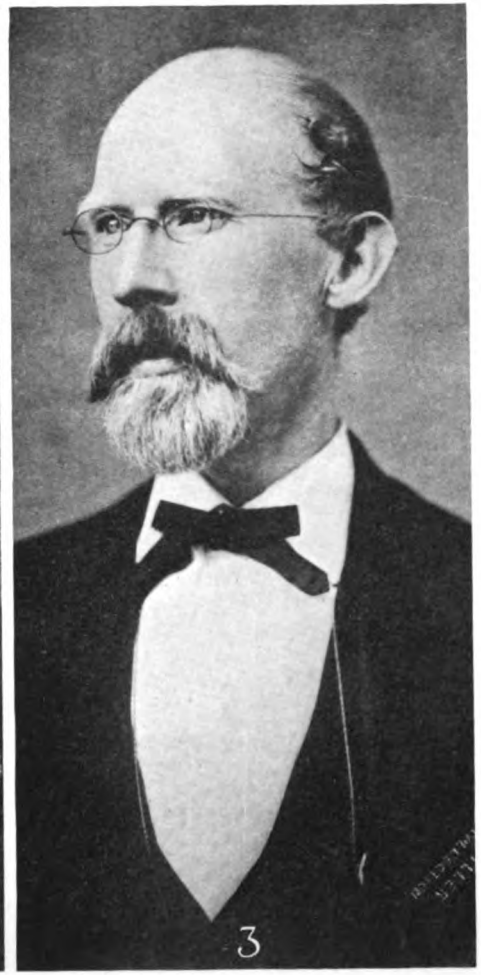
BEVERLEY RANDOLPH WELLFORD
Sixth President of the American Medical Association.



GEORGE W. BAGBY



JAMES EWELL



WILLIAM H. TAYLOR

about Wives appeared in *Harper's* in 1855. In 1857 he became Washington correspondent for the New Orleans *Crescent* and in his spare time wrote and published in the *Southern Literary Messenger* a series of letters called *Mozis Addums to Billy Ivvins.* With their appearance "Moze Addums" became a household word in Virginia. This simple character, fresh from the backwoods of Buckingham County, appearing in many ridiculous and amusing situations, marked Bagby at once as a talented delineator of Southern character: " 'Mozis Addums' is Virginia's contribution to America's literature of humor," claims one of Bagby's biographers.[4] The ephemeral nature of his appeal is explained by the fact that the humorous device depends largely upon bad spelling and grammar.[5] Widely appreciated as a writer of merit, Bagby moved to Richmond in 1859 to become librarian to the Virginia Historical Society and the Richmond Library Association, and a contributor to several daily papers. A novel, *Blue Eyes and Battlewick* appeared in 1860, and in the same year he was made editor of the *Southern Literary Messenger.* In one of his sketches he had described the *Virginia Editor* as "a young, unmarried, intemperate, pugnacious, gambling gentleman." On at least one of these stigmas he turned his back in 1863, for in this year he married Lucy Parke, the daughter of Dr. Lewis Webb Chamberlayne. The *Southern Literary Messenger* under his leadership became editorially secessionist, in its literary departments committed to the policy of developing "tales, stories, poems that smacked of the soil."

After a brief enlistment as a private in the army he returned to the Herculean task of producing a literary periodical in the pinch of war and within the sound of battle. Among those who fled from the Confederate capital with the evacuation of Lee's army in 1865, he shortly found his way back to Richmond, seeking to recuperate his fortunes and support his family. In an effort to make a living in those hard times he decided to try the lecture platform. *Bacon and Greens* was the subject of a humorous lecture which carried him on a successful tour of Virginia, productive of congratulations but of little money. *The Disease Called Love, Sense and Nonsense,* and *Women Folks* followed, and Bagby as a lecturer was as popular as he had been as a writer. Perhaps the best of his lectures is *The Old Virginia Gentleman.* Redolent with humor and pathos it idealized and retraced in a time of suffering and deprivation the good old days of the antebellum South. In 1867 he attempted the publication of *The Native Virginian* at Orange Court House. Three years later he returned to Richmond to become state librarian, a position he lost soon after the Read-

[4] King: Dr. George William Bagby, p. 63.

[5] "Babis in ginrul is bald-heded, bo-leged disturbers uv the piece. They cums into this worl' frownin horrid, fists doubled up, red as peper, hot as jinjer, and hongry as hogs."—Meekinses' Twinses.

justors came into power. Contributions to Lippincott's and Putnam's magazines; a book, *What I Did With My Fifty Millions, How Rubenstein Played, John Brown and William Mahone,* and *Meekinses' Twinses,* were the output of his latter years. He died November 29, 1883 of what was probably cancer of the tongue. Thomas Nelson Page said of him: "He was a physician by profession, a humorist by the way; but God made him a man of letters. . . . Among all Virginia's writers few have had the love to feel and the gift to portray life as Bagby had . . . the curious reader may find in George W. Bagby's pages, pictured with a sympathy, a fidelity and an art which may be found nowhere else, the old Virginia life precisely as it was lived before the war."[6]

Burning the midnight oil, his slender figure poring over some old volume made legible to his myopic eyes by a large magnifying glass, William H. Taylor (1835-1917) was a familiar sight in the late 'nineties to pedestrians passing his basement office on East Grace Street. He was born in Richmond, May 17, 1835. Prepared for the study of medicine in the private schools of the city, he graduated from the Medical College of Virginia in 1856. Shortly afterwards he enlisted in the Confederate service as an assistant surgeon. Years later in an address entitled *Some Experiences of a Confederate Assistant Surgeon* he harks back to this time when, fed on corn bread and sorghum molasses, enduring the hardships of the private soldier and ministering to the sick with few supplies other than blue mass, opium, and a pocket case of instruments, he did his part in Lee's army and received a serious wound at the Battle of Gettysburg. Shortly after the war he made a tour of Europe and in 1871 published his first book, *Travels of a Doctor of Physic.* This account of his journey, unlike many books of travel, is amusing and entertaining. He sailed on "a little turgiversatory steamer with a hard-swearing captain," and landed first at Havana where a revolution was in process and "the chamber maids were of the masculine gender." His description of a Spanish bullfight and of the seasickness which he escaped with his "withers unwrung" would do credit to Mark Twain. In an entertaining account of sunny Spain the young misogynist pays tribute to the dark-eyed maidens of Cadiz. Before his return to this country he had visited Gibraltar, the coast of Africa, Malta, Italy, France, and England, describing each in the same humorous style.

Back in Virginia once more he became professor of chemistry, toxicology, and medical jurisprudence in the Medical College of Virginia, holding the chair until his resignation in 1913. There was no more alert, respected, beloved member of the faculty. In 1872 he was made coroner of Richmond. During

[6]Bagby: The Old Virginia Gentleman and Other Sketches, pp. viii, ix, xi.

his forty-five-year tenure of office he investigated no less than 10,000 cases of criminal poisoning. He was also state chemist, professor of chemistry in the Richmond high school, and for twenty years a member of the Richmond Board of Health. As a lecturer and writer he won wide recognition. His sharp sallies of wit, his effective use of sarcasm and satire made him an opponent few dared encounter. Usually he administered his lashings, excoriations, and pommellings with such good humor that few took offense. Miserably nearsighted, he was once asked in court, in an insinuating manner, by a browbeating lawyer to tell the jury just how far he could see. "Ninety-six million miles," he replied instantly, and in proof of his assertion declared that he could see the sun.

A lecture on *Science and the Soul,* in which he revealed to his students ideas not in accord with current orthodox religious tenets, called forth a storm of public protest. In his own words: "I awoke one morning and found myself infamous." His sharp rejoinder convinces the sympathetic reader that at least he was not an atheist. His last book, *De Quibus,* contains besides *Science and the Soul* the essays: *On the Occult, The Sorrows of Science, Women, The Burial of Ophelia,* and *The Old-Time Schooling.* A characterization of Oliver Wendell Holmes might well be applied to him: his "pen has the point of a French rapier and draws blood whenever he chooses to use it with that intent." Dr. Taylor died a bachelor in the early part of 1917.

In 1851 and 1852 a history of Richmond was contributed serially to the *Southern Literary Messenger* by John P. Little, M. D. This account of the city in twelve chapters aroused considerable interest at the time, was reprinted soon afterwards, and has recently again been made available in book form. It is the earliest history of the city, antedating that of Mordecai. Some account of the life of Dr. Little appears in the introduction to the last edition.[1]

In 1880 Samuel Selden of Norfolk published a book of *Poems,* one of which deals with the yellow fever epidemic in Norfolk. Henry M. Clarkson of Prince William County, a veteran of the Civil War and a vice-president of the state medical society, published *Songs of Love and War* in 1898. Varied by a few short political and martial poems, his book consists of short expressions in verse of the homely sentiments of a Virginia country doctor.

II

About the middle of the Nineteenth Century we encounter a curious group of medical publications—six or seven books, a number of pamphlets, and many

[1]Little: History of Richmond, Dietz, 1933.

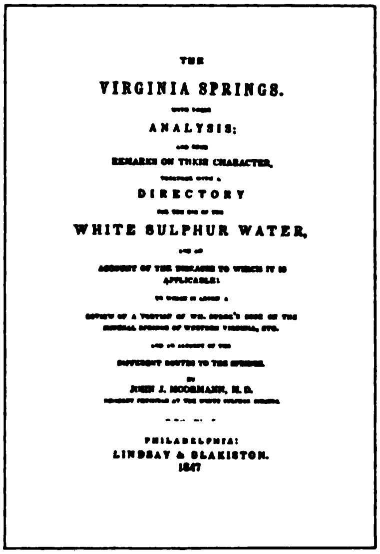
articles in the current medical journals—all dealing with the virtues of Virginia's mineral springs. Most of them were written by physicians, a few by ministers of the Gospel. The earliest was written in 1811 by the Reverend James Madison and was called *The Yellow Springs of Virginia.* In 1834 appeared a series of letters called *Observations on the Mineral Waters in the South Western Part of Virginia,* by the distinguished William E. Horner, M. D., of Philadelphia. This was followed by *Medical Properties of the Gray Sulphur Springs* (1836) by A. E. Miller, M.D.; and *A Visit to the Red Sulphur Springs of Virginia* (1837) by Henry Huntt, M. D. *The Invalid's Guide to the Virginia Hot Springs* (1839) by Thomas Goode, M. D., gives an account of the medicinal properties of these waters, with cases illustrating their efficacy, and claims for them therapeutic virtues which run the gamut from cures of deafness and loss of voice to relief for that host of maladies classified under the heading of "liver diseases." We next encounter *The Salt Sulphur Springs of Monroe County* (1840) by Thomas D. Mutter, M. D., a native of Virginia who later made a name for himself in Philadelphia.[8] William Burke, M. D., published three books: *The Mineral Springs of Western Virginia* (1842), *The Mineral Springs of Virginia with Remarks on their Use, and the diseases to which they are applicable, and in which they are contra-indicated* (1851), and *The Red Sulphur Springs, Monroe County, Virginia* (1860). John J. Moorman, for many years resident physician at White Sulphur Springs, published *The Virginia Springs* (1847), an analysis of twenty-three springs.[9] This appeared in revised and enlarged form in 1857 and 1859. *Observations on the Mineral Waters of Western Virginia* (1858) was written by P. B. Tindall, M. D., a resident of Philadelphia but a frequent visitor to the springs. Later books were *An Account of the Medicinal Properties of the Healing Springs, Bath County, Virginia* (1870), by M. H. Houston, M. D., and *An Account of the Hot Springs, Bath County, Virginia* (1875), published by the proprietors but including *"A Brief Notice of the Effects of Thermal Baths in Cases of Gout, Rheumatism, etc."* by Professor James L. Cabell of the University of Virginia.

For years the general enthusiasm for the water cures of Virginia continued. The watering places were regarded as a great asset to the state. Visitors came from far and near. No Virginia gentleman felt that he was doing his duty by his family unless he sent them to spend the summer at the springs.[10] By coach

[8] Mutter was born in Richmond, April 1811, received his A. B. at Hampden-Sidney College, and studied medicine under Dr. Semmes, of Alexandria, before going to Philadelphia.

[9] This work included a Directory for the Use of the White Sulphur Waters, first published by Moorman in 1839.

[10] Typhoid fever often lurked in these gathering places, and many epidemics were directly traceable to food, flies, and the general insanitary arrangements.


THE

VIRGINIA SPRINGS.

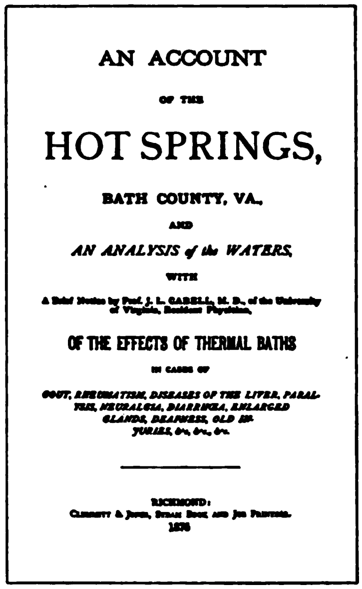
ANALYSIS:

REMARKS ON THEIR CHARACTER,

DIRECTORY

WHITE SULPHUR WATER,

PHILADELPHIA:
LINDSAY & BLAKISTON.
1847


AN ACCOUNT

OF THE

HOT SPRINGS,

BATH COUNTY, VA.,

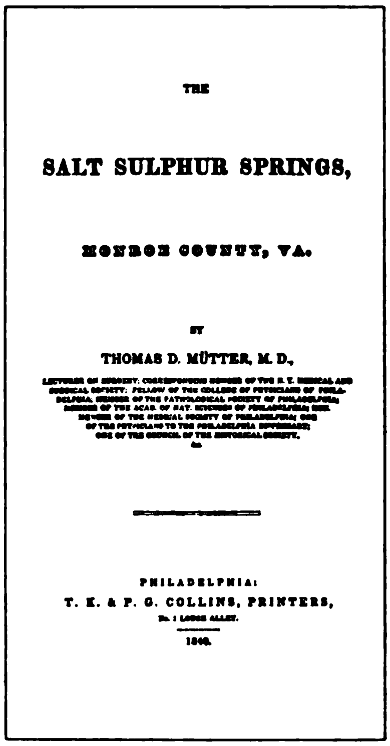
AND

AN ANALYSIS of the WATERS,

WITH

OF THE EFFECTS OF THERMAL BATHS

RICHMOND:


THE

SALT SULPHUR SPRINGS,

MONROE COUNTY, VA.

BY

THOMAS D. MÜTTER, M. D.,

PHILADELPHIA:
T. K. & P. G. COLLINS, PRINTERS,

Title pages of works on Virginia's mineral springs.

in the earlier days, by railroad later, Virginians annually journeyed to these mountain resorts, not only because it was the fashionable thing to do, but because the rules of health demanded it. The Medical Society of Virginia seriously studied and debated the respective values of the different waters and, as if to set the seal of its approval, repeatedly held annual meetings at one or another of the resorts. By 1875 some intimation of skepticism appeared in the medical journals, but an editorial writer, quick in defense, was "bold to affirm . . . that an insufficient value is too frequently ascribed to the *directly* remedial virtues of the fountains that gush fresh from the mineral laboratories that Providence has made accessible to man."[11]

Interest in the springs was not confined to Virginia. Dr. George Hayward of Boston described a visit to *"Some of the Medicinal Springs of Virginia"* in a leading article in the *Boston Medical and Surgical Journal* in 1840. The same journal in 1843 criticized editorially the excessive claims made for the Virginia Hot Springs: the waters, the editor claimed, were certainly helpful in some cases, but it was absurd to call them a universal panacea. Yet that same year the journal carried a favorable review of Moorman's book on *The Virginia Springs.*

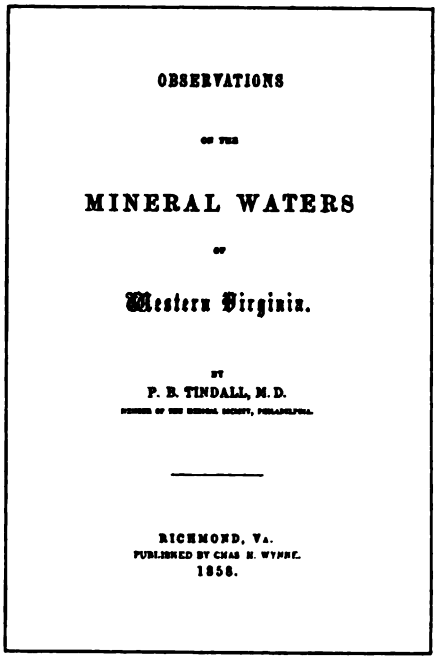
Improved comforts at home during the summer months, the introduction of the automobile, and a better understanding of the therapeutic limitations of all the so-called mineral waters have wrought a great change. Today "Ichabod" is written over most of Virginia's once famous mineral springs, and many of them are as deserted as the Baths of Caracalla.

III

An early American work on chemistry came from the pen of Thomas Ewell, M. D. (1785-1826), a native of Virginia and a surgeon of the United States navy. It was published in 1806 under the title *Plain Discourses on the Laws or Properties of Matter: containing the elements or principles of modern chemistry,* and was offered to "artists, farmers and fellow citizens," as a nontechnical presentation of useful chemical knowledge. Both Thomas Jefferson and Bushrod Washington wrote approvingly of it. Ewell's other works were *Letters to Ladies,* 1817, *Improvements in the Theory and Practice of the Science of Medicine,* 1819, and the *American Family Physician,* 1824.[12]

His brother, James Ewell (1773-1832), published in 1807 *The Planter's and Mariner's Medical Companion,* a work which enjoyed considerable popularity

[11] Virginia Medical Monthly, 1875-'76, v. 2, p. 145.
[12] Hayden: Virginia Genealogies, p. 348.



OBSERVATIONS

ON THE

MINERAL WATERS

OF

Western Virginia.

BY

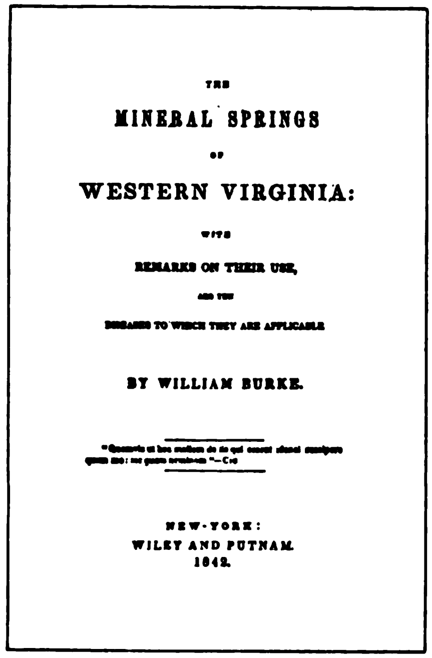
P. B. TINDALL, M. D.

MEMBER OF THE MEDICAL SOCIETY, PHILADELPHIA.

RICHMOND, VA.

PUBLISHED BY CHAS. H. WYNNE.

1858.



THE

MINERAL SPRINGS

OF

WESTERN VIRGINIA:

WITH

REMARKS ON THEIR USE,

AND THE

DISEASES TO WHICH THEY ARE APPLICABLE

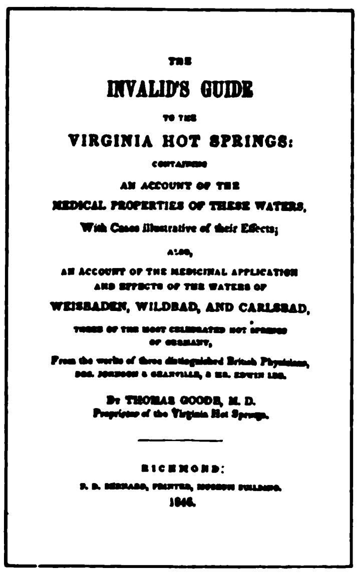
BY WILLIAM BURKE.

"[illegible]"—Cic

NEW-YORK:

WILEY AND PUTNAM.

1842.



THE

INVALID'S GUIDE

TO THE

VIRGINIA HOT SPRINGS:

CONTAINING

AN ACCOUNT OF THE

MEDICAL PROPERTIES OF THESE WATERS,

With Cases Illustrative of their Effects;

ALSO,

AN ACCOUNT OF THE MEDICINAL APPLICATION

AND EFFECTS OF THE WATERS OF

WEISBADEN, WILDBAD, AND CARLSBAD,

THREE OF THE MOST CELEBRATED HOT SPRINGS

OF GERMANY,

From the works of three distinguished British Physicians,

DRS. JOHNSON & GRANVILLE, & MR. EDWIN LEE.

By THOMAS GOODE, M. D.

Proprietor of the Virginia Hot Springs.

RICHMOND:

[illegible]

1846.

Title pages of works on Virginia's mineral springs.

and underwent many revisions. The fifth edition contained an account of the capture of Washington by the British in 1814, of which Ewell was an eyewitness, and a section on camp fever, with which he became familiar in the War of 1812. In 1847 a tenth edition appeared, called *The Medical Companion or Family Physician,* containing a nurses' guide and a treatise on hydrotherapy, homeopathy, and "the chronothermal system," together with an account of the author's life. He was a son of Colonel Jesse Ewell and a student under James Craik, who had married his aunt. In 1801, carrying with him vaccine matter given him by his father's friend and classmate, Thomas Jefferson, he moved to Savannah, where he is said to have been the first to vaccinate for smallpox. He died of cholera in 1832.

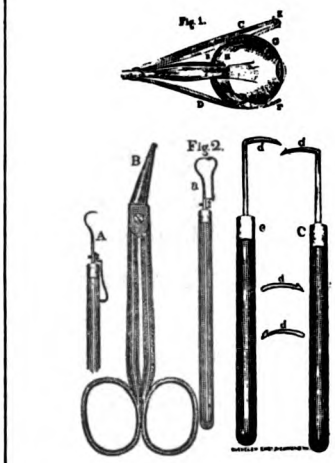
Gustavus R. B. Horner, U. S. Navy, member of a family distinguished in Virginia medical history for several generations, published in 1839 *Medical and Topographical Observations on the Mediterranean,* in 1845 *Medical Topography of Brazil and Uraguay,* and in 1854 *Diseases and Injuries of Seamen.*

Samuel K. Jennings (1771-1854), though a native of New Jersey, spent twenty-five years of his life in Virginia practising medicine. In addition to busily proclaiming the virtues of his patented "vapor bath," he found time to write several books on medicine.[13] *The Married Lady's Companion, or Poor Man's Friend* was published in Richmond about 1808. From its title the contents of this little book may be surmised, and its purpose may be gathered from the author's statement that he "will pretty commonly keep a supply of such medicines as may suit the purchasers of his book." Other writings of Jennings were: *A Plain Elementary Explanation of the Natural Cure of Disease,* Richmond, 1814, and *Letters and Certificates Recommending the Patent Portable Warm and Hot Bath,* Norfolk, 1816. *A Compendium of Medical Science; or, Fifty Years Experience in the Art of Healing,* appeared in 1847. In 1817 he moved to Baltimore and afterwards became a prominent member of the Maryland profession.

In like popular vein Ralph Schenck of Fincastle published in 1842 *The Family Physician.* Among other things it contained a treatise on chemistry, anatomy, physiology, and materia medica.

At the "Annual meeting of the Boylston Medical Committee of the Harvard University [August 1, 1832], the premium of fifty dollars or a gold medal of that value was awarded to a *Dissertation on Fistula Lachrymalis.*"[14] Robert W. Haxall of Richmond was the author of this essay. It is a lucid presentation of the various surgical conditions that may arise in the lachrymal apparatus and

[13] Transactions of the Medical and Chirurgical Faculty of Maryland, 1856, pp. 47-50.
[14] This prize was established at Harvard College in 1800 by Ward Nicholas Boylston.



A TREATISE

ON

STRABISMUS,

WITH A

DESCRIPTION OF NEW INSTRUMENTS

DESIGNED TO

IMPROVE THE OPERATION FOR ITS CURE,

IN SIMPLICITY, EASE AND SAFETY,

ILLUSTRATED BY CASES.

BY JAMES BOLTON M.D., A.M.

MEMBER OF THE MEDICAL SOCIETY OF VIRGINIA.

RICHMOND:

PRINTED BY P. D. BERNARD, MUSEUM BUILDING.

1842

A TREATISE

ON

SPECIAL AND GENERAL

ANATOMY,

IN TWO VOLUMES.

BY

WILLIAM E. HORNER, M. D.

ADJ. PROF. ANAT. UNIVER. PENNSYLVANIA—MEMBER OF THE AMERICAN PHIL. SOCIETY—SURGEON AT THE PHILADELPHIA ALMS HOUSE, &c.

VOL. I.

Philadelphia:

H. C. CAREY & I. LEA.

W. Brown, Printer

1826.

THE

Married Lady's Companion,

OR,

POOR MAN'S FRIEND;

IN FOUR PARTS.

I. An address to the Married Lady; who is the Mother of Daughters.

II. An address to the newly Married Lady.

III. Some important hints to the Midwife.

IV. An essay on the management and common diseases of children.

BY SAMUEL E. JENNINGS

The fear of the Lord prolongeth days; but the years of the wicked shall be shortened. PROV. X. 27.

RICHMOND:

Printed by T. NICOLSON.

Title pages of medical works by Virginians.

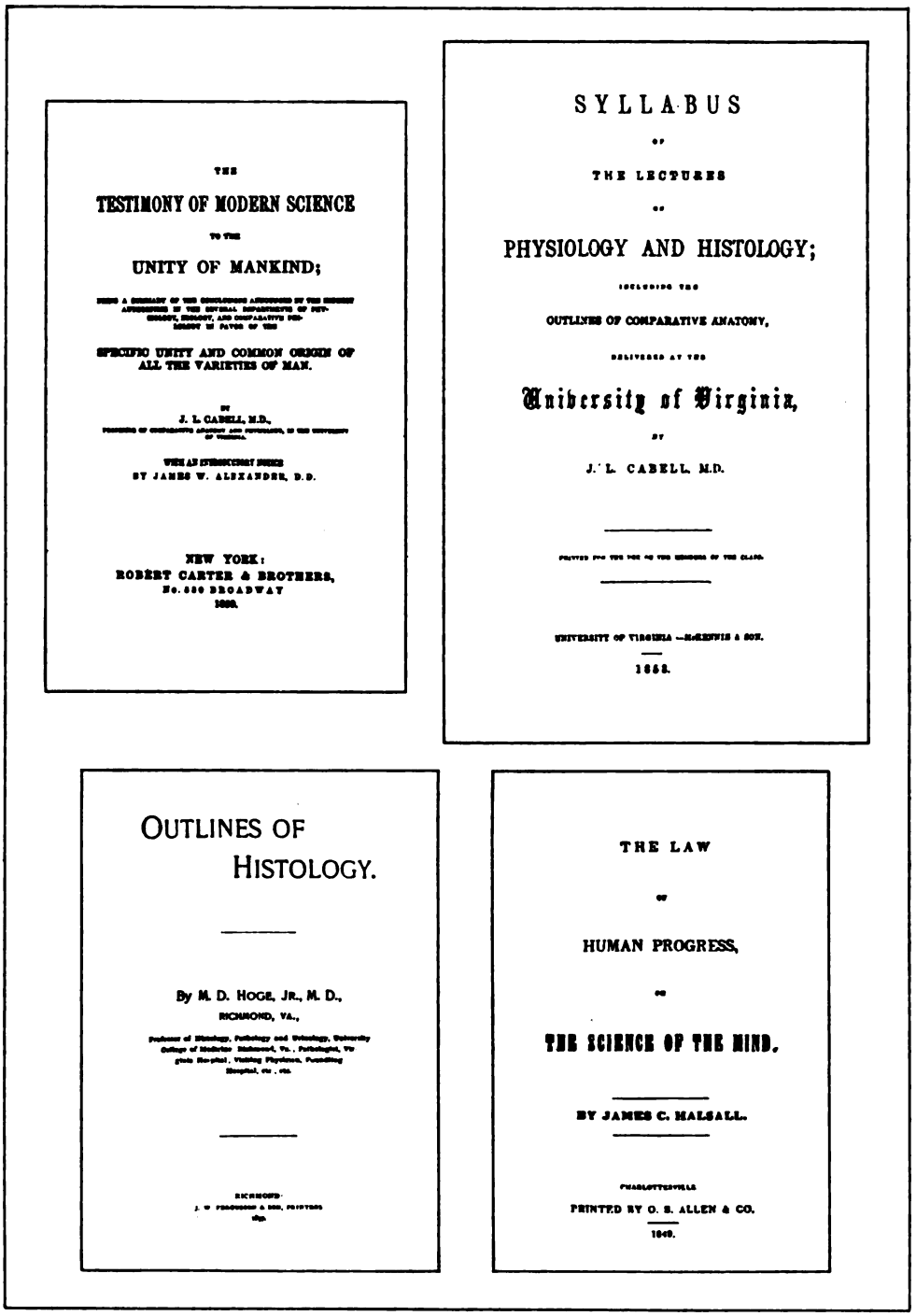
shows that Haxall, though still a young man, had already engaged in considerable original investigation. The procedures and instruments recommended by him in this essay were said to be original. Four years later Haxall was again the winner of the Boylston prize, writing on the *Importance of Physical Signs in the Various Diseases of the Abdomen and Thorax.*

In 1873 William C. Dabney of Charlottesville won the same prize with an essay entitled *The Value of Chemistry to the Medical Practitioner.* In June 1852 the Fiske Prize of fifty dollars, offered by the Rhode Island Medical Society, was awarded to John F. Peebles of Petersburg for a gynecological treatise on *Displacements of the Non-Gravid Uterus.*

Among the smaller works of Virginians James Bolton's (1812-1869) *Treatise on Strabismus with a Description of New Instruments Designed to Improve the Operation for its Cure in Simplicity, Ease and Safety, Illustrated by Cases* (1842) stands out conspicuously. At the time of its appearance it was widely commented upon and quoted both in this country and abroad. The operation as described by Bolton in this work was performed without anæsthesia or antiseptics, with few instruments, and with the help of only one assistant. It consisted of a simple tenotomy of the internal rectus. In an attempt to diminish the drying of the eye and the temptation to wink, the author invented "the steel hook with its guard, and I have been much gratified at finding it so completely successful, as to render the operation much more easily borne."[15] The originator considered his operation "applicable to every period of life, from childhood to old age, with equal prospects of success."[16] He reported eight cases, affirming that "In every instance the squint has been entirely removed."

Bolton was a native of Savannah. He moved to New York when a child, receiving his A. B. from Columbia in 1831 and his M. D. from the College of Physicians and Surgeons in 1836. He began the study of the diseases of the eye and ear in the office of Dr. J. Kearney Rogers. At one time he assisted Dr. Valentine Mott. Shortly afterwards he began practice in Richmond, where he soon occupied a leading position in the profession of the state, editing the *Stethoscope* in 1854, serving as chairman of important committees of the American Medical Association and as president of the Medical Society of Virginia in 1858. He was a surgeon in the Confederate army, at one time in charge of Howard's Grove Hospital and at another in charge of Bellevue Hospital. After

[15] Bolton: Treatise on Strabismus, p. 19. No mention is made of the procedure known as advancement of the opposite muscle, now the favorite operation.
[16] Bolton: Treatise on Strabismus, p. 26.



THE

TESTIMONY OF MODERN SCIENCE

TO THE

UNITY OF MANKIND;

BEING A SUMMARY OF THE GEOLOGICAL ARGUMENTS BY THE HIGHEST AUTHORITIES IN THE SEVERAL DEPARTMENTS OF PHYSIOLOGY, ETHNOLOGY, AND COMPARATIVE PHILOLOGY IN FAVOR OF THE

SPECIFIC UNITY AND COMMON ORIGIN OF ALL THE VARIETIES OF MAN.

BY

J. L. CABELL, M.D.,

PROFESSOR OF COMPARATIVE ANATOMY AND PHYSIOLOGY, IN THE UNIVERSITY OF VIRGINIA.

WITH AN INTRODUCTORY NOTICE

BY JAMES W. ALEXANDER, D.D.

NEW YORK:

ROBERT CARTER & BROTHERS,

No. 530 BROADWAY

1860.

SYLLABUS

OF

THE LECTURES

ON

PHYSIOLOGY AND HISTOLOGY;

INCLUDING THE

OUTLINES OF COMPARATIVE ANATOMY,

DELIVERED AT THE

University of Virginia,

BY

J. L. CABELL, M.D.

PRINTED FOR THE USE OF THE MEMBERS OF THE CLASS.

UNIVERSITY OF VIRGINIA.—McGUFFEY & SON.

1858.

OUTLINES OF

HISTOLOGY.

By M. D. HOGE, JR., M. D.,

RICHMOND, VA.,

Professor of Histology, Pathology and Physiology, University College of Medicine, Richmond, Va.; Pathologist, Virginia Hospital; Visiting Physician, Penitentiary Hospital, etc., etc.

RICHMOND:

J. W. FERGUSSON & SON, PRINTERS.

1850.

THE LAW

OF

HUMAN PROGRESS,

OR

THE SCIENCE OF THE MIND.

BY JAMES C. HALSALL.

CHARLOTTESVILLE:

PRINTED BY O. S. ALLEN & CO.

1849.

Title pages of medical works by Virginians.

the war he continued to be an important figure in the medical profession of Virginia until his death in 1869.[17]

William Leeds Wight published in Petersburg in 1843 *Observations on Vegetable and Animal Physiology.* Unusually favorable comments greeted this work from the columns of the *American Journal of the Medical Sciences,* which referred to the writer as an "intelligent and ingenious author" and quoted at length from his book. Wight's experiments on the nutrition of plants and animals were compared to the investigations of John W. Draper on the influences of sunlight.[18] Dr. Wight was born at "Tuckahoe" in Goochland County in 1802, was a student at Yale College, and in 1825 graduated at the University of Pennsylvania in medicine.[19] The only known surviving copy of his book is in the surgeon general's library in Washington. His surgical instruments and cupping apparatus are in the possession of his grandson, Richard C. Wight of Richmond.

The published works of John Minson Galt II (1819-1862) are confined to consideration of various phases of mental disease, to the study of which he devoted his life. His *Practical Medicine,* 1843, was compiled chiefly from notes and histories left by his father, Alexander D. Galt. *The Treatment of Insanity,* 1846, was a work of nearly six hundred pages, for the most part consisting of a compilation of notes made by the author from works of the world's leading authorities on insanity. The *Boston Medical and Surgical Journal* reviewed it favorably, noting that it showed "the progress of humanizing views." Galt's other published works were *Essays on Asylums for Persons of Unsound Mind,* 1850; a second series of the *Essays,* 1853; *Insanity in Italy,* 1854; and *A Lecture on Idiocy,* 1859.[20]

The only original work on obstetrics by a Virginian appeared in 1848. It was a book of over four hundred pages entitled *Elements of the Principles and Practice of Midwifery,* and was favorably reviewed in the leading journals. David H. Tucker was the author, and the subject was covered under subdivisions similar to those commonly employed today.

In 1853 William I. Cooke of Portsmouth published in New York his *Theory and Practice of Medicine,* one of the few formal works of this character written by a Virginian.

Dr. James C. Halsall published in Charlottesville in 1849 *The Law of Human Progress or the Science of the Mind.* The *Virginia Medical and Surgical*

[17] Toner: Article in Transactions of the American Medical Association, v. 31, p. 1019.
[18] American Journal of the Medical Sciences, 1844, v. 8, p. 414.
[19] American Medical Recorder, 1825, v. 8, p. 644.
[20] Index Catalogue of the Library of the Surgeon General's Office, first and second series.

Journal reviewed the book favorably in 1855. In this small volume the author goes to great pains to prove that even during the brief period of recorded history the human mind has exhibited increased capacity for acquiring and utilizing knowledge.[21]

In 1859 James L. Cabell published his *Testimony of Modern Science to the Unity of Mankind.* It is a 344-page work of closely knit argument, in which the author attempts to refute the views of Nott and Gliddon and of Agassiz, who had undertaken to disprove the unity of the human species. Cabell bases his conclusions upon a wide acquaintance with the results of contemporary investigation in this field, and disclaims any original research. He establishes his thesis by ably defending the doctrine of permanent varieties, showing how acquired characteristics become hereditary, as well as by pointing out the fixed physiological characteristics of the different species which do not naturally permit of interbreeding or the propagation of hybrids. Cabell's book appeared several months before Charles Darwin's work *On the Origin of Species by Means of Natural Selection.* How clearly he grasped, before the publication of Darwin's book, the fundamental doctrines of evolution may be gathered from the most hurried reading of his work. "We may, then, regard it as an established fact," he writes, "that under the influence of causes sometimes appreciable, though often quite unknown, animals may acquire structural characters, differing in many respects from those of the parent stock, and then transmit such peculiarities to their own offspring with entire constancy, so as to give rise to a new breed."[22]

Forty-three years before Hugo de Vries' theory of mutation appeared, Cabell asserted that "these newly acquired characters may then be perpetuated by hereditary transmission. . . . A similar effect is produced in those cases in which a given variation appears accidentally in a single individual and is then transmitted to his offspring."[23]

Cabell's *Syllabus of Lectures on Physiology and Histology* appeared in 1853. It affords important information in regard to the teaching he was then engaged in at the University of Virginia, showing that considerable attention was paid to zoölogy and that comparative anatomy was a part of the curriculum.[24]

One of the best written books of the century was James E. Reeves's *Practical Treatise on Enteric Fever,* 1859. The author was a country doctor, located at

[21] Virginia Medical and Surgical Journal, 1855, v. 4, p. 159. A copy of the book is in the Virginia State Library.
[22] Cabell: Unity of Mankind, p. 36.
[23] Cabell: Unity of Mankind, p. 22.
[24] The first course in comparative anatomy to be given in any medical school in this country was given at the University of Virginia.

Philippi, a very small town in Virginia. His book was based upon a study of 130 consecutive cases occurring in his own practice. He preferred the term "enteric" to "typhoid" fever because he did not wish to confuse the disease with typhus. Speaking of contagion—a moot point at this period—he says, "My own opinion is not wavering upon the subject, and I do not hesitate to declare my firm belief of its contagiousness."

The most interesting sections of the book deal with the history of the disease in Virginia, based on information gained from personal letters to doctors in all sections of the state. From these answers it seems to have been the consensus of opinion that typhoid had been generally recognized in Virginia for only about ten years and that it was rapidly becoming more prevalent. One Richmond physician, who had practised forty years, thought he had observed an occasional case during the early years of his practice, though it was then called by a different name and was much less frequent. Dr. Reeves's book shows that the Virginia physician of 1859 believed typhoid fever had first manifested itself as a serious disease about 1845.

Two books, in addition to his numerous contributions to journals, were published by John Herbert Claiborne of Petersburg. One was a collection of case reports, much after the manner of Richard Cabot, with the clinical history, method of diagnosis, treatment, and follow-up notes. It was issued in 1873 as *Clinical Reports From Private Practice.* Claiborne's second book was one of reminiscences, giving an account of the author's life as well as a history of the people among whom he lived—"their character, their condition and their conduct before the war, during the war and after the war." It appeared in 1904 under the title *Seventy-five Years in Old Virginia* and contains extremely interesting sketches of medical men, especially those in Petersburg.

War Reminiscences by the Surgeon of Mosby's Command was published by A. Monteiro of Manchester in 1890. Its chief interest to physicians today is its extremely caustic references to the medical profession during the period of the Civil War.

A Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinine, published in 1882 by Otis F. Manson, was a complete and creditable presentation of this subject in book form. Manson's chief interest centered in malaria and quinine.

Moses Drury Hoge, Jr. (1861-1920), having enjoyed exceptional advantages, began the practice of medicine in Richmond in 1886. Few Virginia doctors at this period were educated outside the state. Hoge had studied at the University of Berlin and received his degree from Heidelberg. He returned home to be

A

TREATISE

ON

PATHOLOGY

AND

THERAPEUTICS.

BY JOHN ESTEN COOKE, M. D.

IN THREE VOLUMES.

VOL. I.

LEXINGTON, KENTUCKY.

1853.

THE

TREATMENT

OF

INSANITY.

BY

JOHN M. GALT, M.D.

HARPER & BROTHERS, PUBLISHERS,

82 CLIFF STREET, NEW YORK

1846

A

PRACTICAL TREATISE

ON

ENTERIC FEVER;

OR

DIAGNOSIS AND TREATMENT:

AN ANALYSIS OF ONE HUNDRED AND TWENTY CONSECUTIVE CASES, DERIVED FROM PRIVATE PRACTICE,

AND EMBRACING A

PARTIAL HISTORY OF THE DISEASE IN VIRGINIA.

BY

JAMES E. REEVES, M.D

PHILADELPHIA:

J. B. LIPPINCOTT & CO

1859

ELEMENTS

OF THE

PRINCIPLES AND PRACTICE

OF

MIDWIFERY.

BY

DAVID H. TUCKER, M. D

WITH NUMEROUS ILLUSTRATIONS.

PHILADELPHIA:

LINDSAY AND BLAKISTON.

1848

Title pages of books by Virginia doctors.

at once recognized as an authority in microscopy and to be made professor of histology, urinology, and pathology in the University College of Medicine in 1893. An active contributor to medical journals on subjects relating to the laboratory, he was a member of the city board of health for a number of years, a president of the Richmond Academy of Medicine, and a founder of the Sheltering Arms Free Hospital. Of more than passing interest are his two little published works, *Diagnostic Urinalysis,* 1896, and *Outlines of Histology,* 1897.[25]

J. W. Long published in 1895 a *Syllabus of Gynæcology.*

A number of Virginia physicians did creditable work in the translation of foreign medical publications of proven merit and popularity. Many of these translations were published in the journals from time to time. Most of them were of short articles. R. A. Lewis in 1852 translated a lecture by Claude Bernard on the *Physiology of the Liver.*[26] Of like character was J. J. Thweatt's translation in 1853 of Duchaussoy's *Causes and Treatment of Prolapsus Ani in Children;*[27] George C. Starke's translation of Clerc's *Syphilitic Chancroid* (1855);[28] A. M. Fauntleroy's translation of Paul Heurteloup's *Clinique Ophthalmologique* (1867);[29] and J. B. McCaw and O. A. Crenshaw's translation of Pajot's *Obstetric Tables* (1856).[30] More ambitious undertakings were Starke's translation of Reybard's *Practical Treatise on Strictures of the Urethra,* published in four sections in the *Virginia Medical and Surgical Journal* in 1855 and 1856, and William Grebe's translation of Krafft-Ebing's *Healthy and Diseased Nerves,* published in Richmond in book form in 1893.

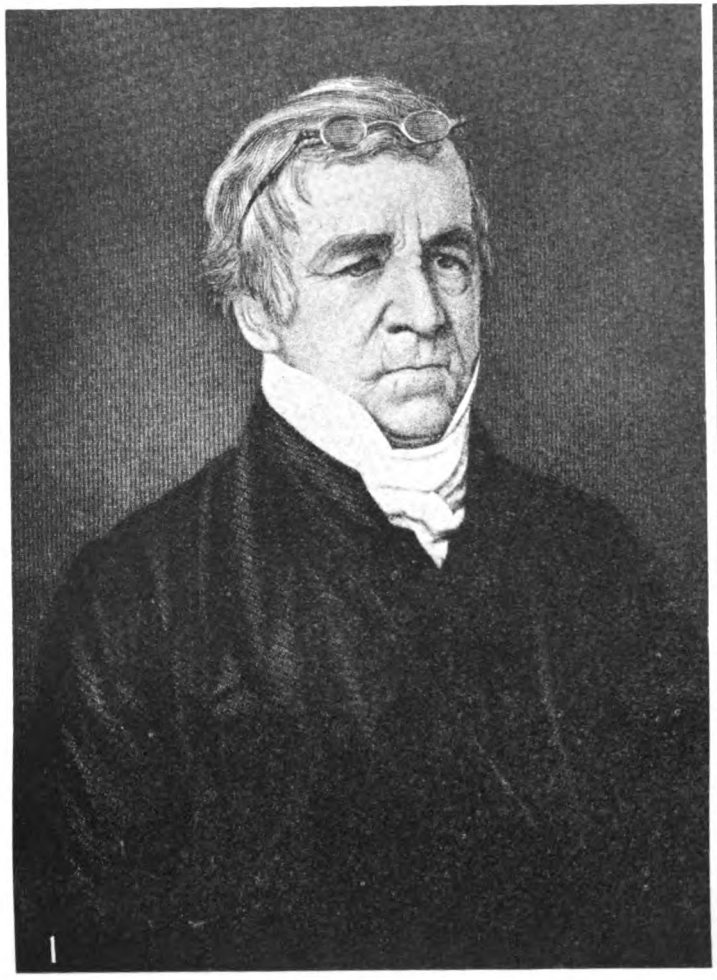
During the latter years of the century several Virginians contributed to well-known systems of medicine. M. L. James was asked to write *Diseases of Digestion* and J. N. Upshur, *Disorders of Menstruation,* for Birmingham's *International Medical Library.* Hunter McGuire contributed a chapter on *Intestinal Obstruction* in Pepper's *System of Practical Medicine,* 1885.

IV

William E. Horner, the greatest Virginia-born anatomist, published his *Lessons in Practical Anatomy for the Use of Dissectors* in 1823 and three years later his *Treatise on Special and General Anatomy,* in two volumes. In this,

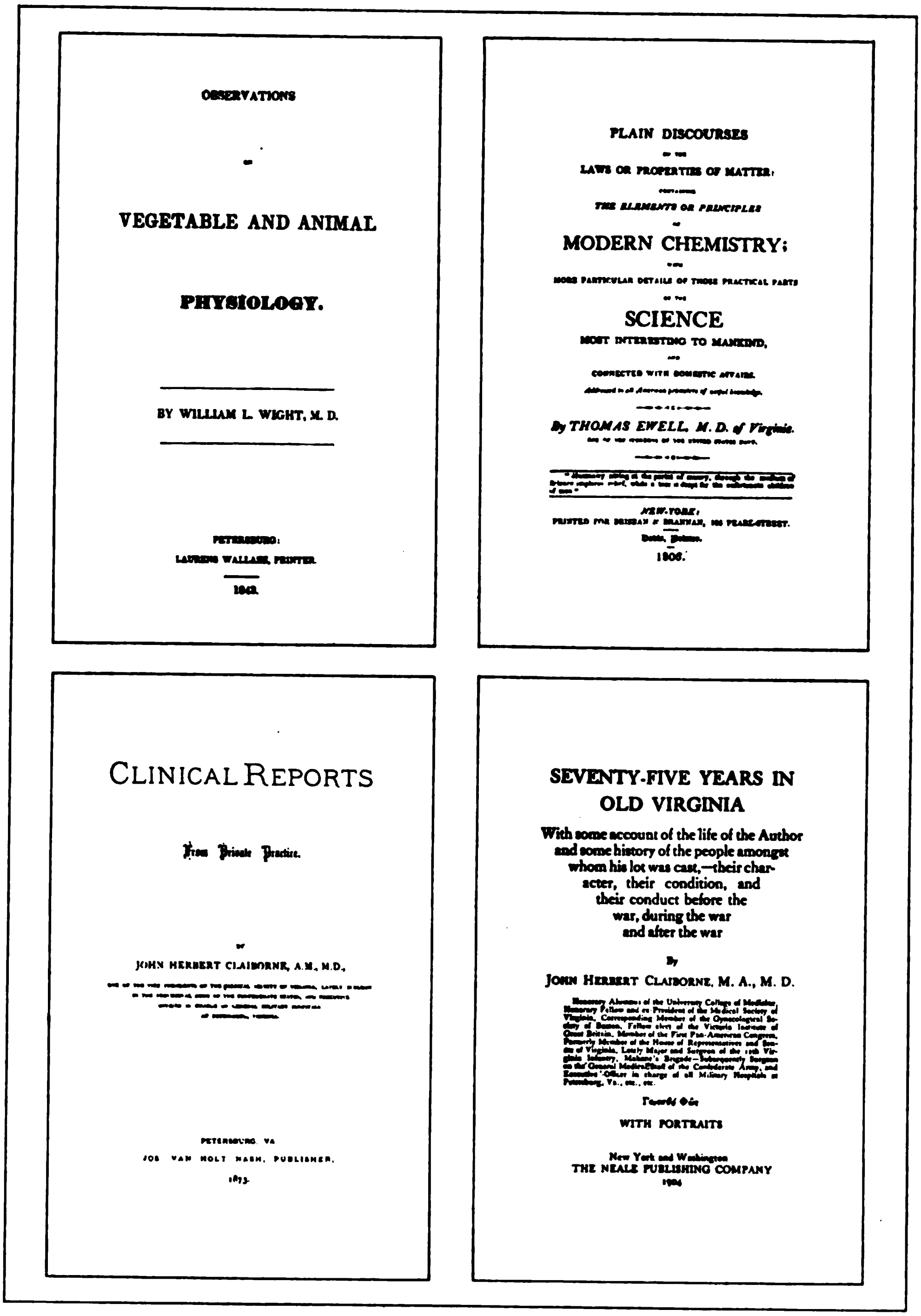
[25] Virginia Medical Monthly, 1920-'21, v. 21, pp. 467, 524.
[26] Stethoscope and Virginia Medical Gazette, 1852, v. 2.
[27] Stethoscope and Virginia Medical Gazette, 1853, v. 3.
[28] Virginia Medical and Surgical Journal, 1855, v. 5.
[29] Richmond Medical Journal, 1867, v. 4.
[30] Virginia Medical Journal, 1856, v. 6.

HUNTER HOLMES MCGUIRE
Forty-fourth President of the American Medical Association.



NATHANIEL CHAPMAN

WILLIAM EDMONDS HORNER



OBSERVATIONS

ON

VEGETABLE AND ANIMAL

PHYSIOLOGY.

BY WILLIAM L. WIGHT, M. D.

PETERSBURG:

LAURENS WALLACE, PRINTER.

1842.

PLAIN DISCOURSES

LAWS OR PROPERTIES OF MATTER:

MODERN CHEMISTRY;

SCIENCE

By THOMAS EWELL, M. D. of Virginia.

NEW-YORK:

1806.

CLINICAL REPORTS

From Private Practice.

JOHN HERBERT CLAIBORNE, A.M., M.D.,

PETERSBURG, VA

JOS. VAN HOLT NASH, PUBLISHER.

1873.

SEVENTY-FIVE YEARS IN OLD VIRGINIA

With some account of the life of the Author and some history of the people amongst whom his lot was cast,—their character, their condition, and their conduct before the war, during the war and after the war

By

JOHN HERBERT CLAIBORNE, M. A., M. D.

WITH PORTRAITS

New York and Washington

THE NEALE PUBLISHING COMPANY

1904

Title pages of books by Virginia doctors.

among other things, he corrects the "inaccuracies of Mr. Bell . . . which we have got without further trouble than thumbing his pages."[81] *A Treatise on Pathological Anatomy* was published in 1829. Eight editions of his *Special and General Anatomy* had appeared by 1851.

John William Draper (1811-1882), who spent about seven years in Virginia and left a professorship at Hampden-Sidney College in 1840[82] to teach chemistry in the University of New York, was a prodigious writer. His published works consisted of a *Treatise on the Forces which Produce the Organization of Plants,* 1844; *A Textbook on Chemistry,* 1846; *A Textbook on Natural Philosophy,* 1847; *History of the Intellectual Development of Europe,* 1852; *Human Physiology: statical and dynamical,* 1856; *History of the American Civil War,* 1867; *History of the Conflict Between Science and Religion,* 1875; and *Thoughts on the Future Civil Policy of America* and *Scientific Memoirs,* 1878.

D. P. Gardner, who also taught at Hampden-Sidney College for a short time, published in 1848 a *Medical Chemistry* for the use of students and physicians.

John Esten Cooke (1783-1853) was the son of a Virginia physician and practised in Warrenton and Winchester for over twenty years. He taught for a while in the Winchester Medical School, became professor at Transylvania in 1827, and published a two-volume *Treatise On Pathology and Therapeutics* in 1828.

Among native Virginians who distinguished themselves in other states was R. C. M. Page (1841-1898), Professor of Medicine in the New York Polyclinic. His *Textbook of the Practice of Medicine,* 1892, was dedicated to his esteemed father, Mann Page, M. D., of Albemarle County. It encompasses medicine in a very short space and some subjects are summarily dealt with. Page's *Handbook of Physical Diagnosis,* first published in 1889, went through many editions and is a clear and concise presentation of physical signs as they are related to the chest.

One of the most prolific medical writers that ever lived in Virginia was Robley Dunglison (1798-1869), the young Englishman whom Jefferson imported to inaugurate medical teaching at the University of Virginia. Before reaching this country he had published a treatise on *Diseases of the Stomach and Bowels of Children* and edited the *London Medical Repository.* He was nine years in Virginia, writing during this time a *Human Physiology* (1832) which went through eight editions, a *Dictionary of Medical Science* (1833) which survived

[81] Horner: Treatise on Special and General Anatomy, p. 5.
[82] While at Hampden-Sidney College Draper took the first successful photographs of a human being, antedating Daguerre.

twenty-three editions and was a recognized authority until very recent times, and in collaboration with George Long of the University *An Introduction to the Study of Grecian and Roman Geography* (1829). After leaving Virginia for Philadelphia he continued to write at an astonishing rate. His later works were *Elements of Hygiene* (1835); *On the Influence of Atmosphere and Locality* (1835); *General Therapeutics, or Principles of Medical Practice* (1836); *The Medical Student, or Aids to the Study of Medicine* (1837); *New Remedies* (1839); *The Practice of Medicine* (1842); and *History of Medicine* (1872). In addition he found time to edit Forbes's *Cyclopedia of Practical Medicine* and the *American Medical Intelligencer,* to write numerous articles, and to serve as coeditor for a three-volume *Dictionary of the English Language, for the Use of the Blind.*[88]

Robert Eglesfeld Griffith (1798-1850), for a short time professor at the University of Virginia, published in 1846 *Chemistry of the Four Seasons,* in 1847 *Medical Botany,* and in 1850 *A Universal Formulary,* designed "to present a compendious collection of formulæ and pharmaceutical processes." It followed in general the plan of the *United States Pharmacopœia,* though in abbreviated form.

[88] Index Catalogue of the Library of the Surgeon General's Office, first and second series.

CHAPTER XVII

FROM GENERATION TO GENERATION

THERE are many examples in Virginia of the natural tendency of physicians' sons to follow in the footsteps of their fathers. Several families of the Old Dominion have produced not one but a number of illustrious physicians.

For three generations the McGuire family has been prominent in Virginia medicine. No less than thirteen members of this family have entered the medical profession, and four have held office as president of the Medical Society of Virginia. The first of this group of McGuires was Hugh Holmes (1801-1873), son of Edward McGuire and Elizabeth Holmes. He was a graduate of the University of Pennsylvania, a president of the American Surgical Society, a founder of the Winchester Medical College, surgeon in charge of hospitals at Lexington and Greenwood during the Civil War, and long a prominent figure in Winchester. His brother, William David McGuire (1807-1877), was also a graduate in medicine of the University of Pennsylvania. For many years he practised near Berryville in Clarke County. Robert Lewis McGuire (1822-1876) was a contemporary and cousin, who was born in Fredericksburg and practised in Fauquier County. Still another cousin was James Mercer Garnett McGuire (1833-1903). He was educated at the University of Virginia before graduating in medicine from Jefferson Medical College, and began practice in Alexandria. He became a surgeon in the Stonewall Brigade, was captured in 1863, exchanged, and wounded at Appomattox. After the war he settled in Clarke County.

A later generation of McGuire physicians included William Edward (1860-1921), son of William David McGuire, a graduate in medicine of the University of Virginia (1886), a teacher in the University College of Medicine, and a beloved practitioner in Richmond. Hunter Holmes McGuire (b.1895) of Richmond is his son. First cousins of William Edward were the two sons of Hugh Holmes McGuire: Hunter Holmes McGuire (1835-1900) and William P. McGuire (1845-1927), who fought in the Confederate army, studied after the war at the Medical College of Virginia, and was long a practitioner in Winchester.

Children of Hunter Holmes McGuire who became physicians are Stuart McGuire of Richmond and Hugh Holmes McGuire of Alexandria. Johnson McGuire, son of this Hugh Holmes, is also a physician. Hunter Holmes McGuire, son of William P. McGuire, is a graduate of the University College of Medicine and is a well-known ophthalmologist of Winchester. William Pendleton McGuire, a cousin, practises in Wylliesburg, Virginia.

The most important medical member of the McGuire family, one of the most important medical figures in all Virginia history, was Hunter Holmes McGuire. He was born in Winchester, October 11, 1835, received his early education at the Winchester Academy, began the study of medicine in the Winchester Medical College, and completed his studies with courses at the University of Pennsylvania and Jefferson Medical College. While still a young man, as medical director of Jackson's army and later of the Second Army Corps, he achieved an enviable reputation both as a surgeon and as an administrator. For the thirty-five years after the war no one seriously challenged his reputation as leading surgeon in the South. He displayed rare gifts as a teacher, first as professor of anatomy in the Winchester Medical School, then while conducting extramural courses in Philadelphia, still later as professor in the New Orleans Medical School and in the Medical College of Virginia, and finally as founder, president, and professor of clinical surgery in the University College of Medicine in Richmond. "This tall, gaunt, angular man, without eloquence of speech or charm of voice or manner,"[1] commanded the respect and admiration of his students to an extraordinary degree and impressed his great personality upon them in a way most of them never forgot. As a surgeon "he was practical, dextrous and ingenious." In 1868 he ligated the aorta, for the first time, it is said, since Sir Astley Cooper performed this surgical feat.[2] His pioneer work in surgery of the prostate, particularly suprapubic cystotomy, was generally applauded. He organized one of the first private hospitals in Virginia.

McGuire's contribution to medical literature was largely in the field of genito-urinary surgery—articles on varicocele, urethral stricture, stone in the bladder, tuberculosis of the bladder, the prostate, and suprapubic cystotomy appearing at various times until 1894. On gunshot wounds of the peritoneum he wrote twice. Other papers dealt with gunshot wounds of the bladder, the fatal wound of Stonewall Jackson, cancer of the breast, iodine in the treatment of goitre, intestinal obstruction, anæsthetics, ovariotomy, excision of the os

[1] Peple, W. L.: Hunter Holmes McGuire, Surgery, Gynecology and Obstetrics, January 1923, pp. 114-118.
[2] Garrison: History of Medicine, p. 537.

calcis, an historical address on the history of medicine, and a controversial article on sexual crimes among the negroes of the South. In 1895 he reported seventeen cases of appendectomy and in 1899 published an article on gallstones.

To such a man many honors naturally come. He was a founder and president of the Medical Society of Virginia and an associate fellow of the College of Physicians of Philadelphia. He was president of the Association of Medical Officers of the Army and Navy of the Confederate States in 1875, of the American Surgical Association in 1886, of the Southern Surgical and Gynecological Association in 1889, and of the American Medical Association in 1892. The honorary degree of LL. D. was conferred upon him at both the University of North Carolina and Jefferson Medical College. He died September 19, 1900, and four years later a statue to his memory was erected in Capitol Square in Richmond, the inscription acclaiming him not only as a physician but as a "useful citizen and broad humanitarian, gifted in mind and generous in heart."[3]

Besides the McGuires there were other physicians of Irish descent in Virginia. The three sons of Dr. Edward Dillon, the immigrant to Prince Edward County, studied medicine and afterwards practised in the county of their birth. They were John, James, and Alexander Dillon. Their sister, Eliza, was the first wife of a physician, John A. Cunningham of Richmond. The Dillons were all highly regarded by their neighbors, and George W. Bagby has left a graphic description of James and Alexander. The oldest brother, Dr. John, died while still a young man. His widow became the second wife of Dr. Cunningham. Born of Irish parents in Cumberland County in 1803, Dr. Cunningham was educated at William and Mary and at Harvard College, graduated in medicine at the University of Pennsylvania (1826), and pursued his studies in Paris and London for three years before starting to practise in Goochland. After business reverses in which he lost his entire fortune he moved to Richmond and established himself on the southeast corner of Eighth and Franklin, his worldly goods consisting of "a pair of silver candlesticks, presented to him by the Rev. Dr. William Norwood, an intimate friend of the family, who had rescued them at the sale."[4] His second son by his first marriage, Francis Deane Cunningham (1836-1885), became one of Richmond's most beloved physicians, receiving a good education in Richmond before attending the University of Virginia and later graduating from the Medical College of Virginia (1857). He was in

[3] Stanard: The McGuire Family in Virginia, with notices of its Irish ancestry and some connected Virginia families.

[4] Personal communication from the late Richard E. Cunningham of Richmond.

Europe for postgraduate study when the outbreak of the Civil War brought him back to serve in the army, first as surgeon to Company F of the Stonewall Brigade, then as surgeon to the Thirtieth Virginia Infantry, later as medical director of the Trans-Mississippi Department of the Confederacy, and finally as inspector of hospitals in Richmond. After the war he was associated in practice with his father, who, however, retired in 1870 and died March 21, 1881, greatly beloved and reverenced by his patients of the older generation—Stewarts, Pages, Caskies, and Andersons. In 1868 Francis Cunningham was elected professor of anatomy in the Medical College of Virginia. He was for many years a prominent member of the City Board of Health and became president of the Medical Society of Virginia in 1876. He was particularly interested in surgery and in diseases of the eye. He died from an intractable dysentery in March 1885.[5]

William Wellford practised medicine in Scotland. His son Robert (1753-1823), who began his career as a surgeon in the British army, was the American progenitor of the family. He settled in Virginia after the Revolution and was made surgeon general of the American army during the Whiskey Rebellion. As an outstanding citizen of Fredericksburg he was long respected. Two of his sons were physicians: Beverley Randolph Wellford (1797-1870) moved from Fredericksburg to Richmond to become professor of materia medica and therapeutics in the Medical College of Virginia and rounded out a distinguished career by serving as president of the American Medical Association in 1853; Horace Wellford (1790-1828) was a graduate of the medical department of the University of Pennsylvania and practised, probably in Fredericksburg. Among the grandsons of Dr. Robert there were five physicians: William Nelson Wellford (1807-1872) and his brother, Francis Preston Wellford (1829-1877); Robert Wellford (1819-), son of Horace; John Spotswood Wellford (1825-1911), a founder of the Medical Society of Virginia and its vice-president in 1870, surgeon in the Confederate States army, president of the Richmond Academy of Medicine, and successor to his father, Beverley Randolph, in his professorship at the Medical College of Virginia; and Armistead Nelson Wellford (1826-1884), his brother. Armistead Nelson was the father of Armistead Landon Wellford (1857-1933) and the grandfather of Beverley Randolph Wellford of Richmond.[6]

A small office in Fredericksburg, still standing, has met the needs of four generations of Carmichael physicians. James Carmichael (1771-1831), an

[5] Personal communication from the late Richard E. Cunningham of Richmond.
[6] Information from Dr. Beverley Randolph Wellford of Richmond.

Edinburgh-trained Scotsman, though somewhat eccentric was generally regarded as a skilful and highly esteemed member of his profession. His son, George French Carmichael (1806-1878),[7] a graduate of the University of Maryland, was the father of Spotswood Wellford Carmichael (1830-1904), a graduate of Jefferson College in 1852 and a surgeon in the Confederate States army. The latter's wife was Fanny Tucker Bryan, sister of the late Joseph Bryan of Richmond, and their son, Dr. Randolph Bryan Carmichael (1869-1924), a graduate of Jefferson, after beginning practice in Fredericksburg won a name for himself in Washington, D. C., as a dermatologist.[8]

The Wallace family was introduced into this country by Michael Wallace (1719-1767), a physician, whose wife was the daughter of another physician, Gustavus Brown of Maryland. From both lines a number of well-known physicians sprang. Michael's own son, James (1755-1790), was a physician; as were his grandsons, two of whom had identical names, James Brown Wallace (1804-1844) and James Brown Wallace (1792-1860). Both of them emigrated to Kentucky. John Hooe Wallace (1793-1873), another grandson, was long prominent as a physician in Fredericksburg. Michael's great-grandsons, John Gordon Wallace (1830-), Gustavus Michael Wallace (1849-), Howson Dade Wallace (1860-), and James Brown Winston (1820-1884) were all physicians.[9] James Westwood Wallace, "a distinguished physician educated at Edinburgh," who died at Warrenton, September 1, 1838, aged sixty-nine, and Dr. James W. M. Wallace, who died at the same place in 1833, were descended from a different line.[10]

The Browns, prominent physicians in Colonial days, continued a family of doctors well into the Nineteenth Century. The sons of the immigrant doctor Gustavus Brown (1689-1762) were the Reverend Richard Brown (1725-1789), who is said to have studied medicine though he did not practise, and Gustavus Richard Brown, M. D. (1748-1804), consultant in Washington's last illness. Two of Richard Brown's sons were physicians—Gustavus Brown (1751-1801) and William Brown (1752-1792), physician general of the Continental army; and two of Gustavus Richard's sons also studied medicine—Gustavus Brown

[7] A letter from his wife to a friend, written in 1866, throws light upon the state of medical practice in Virginia immediately after the war. "Before the war, he [Dr. Carmichael] had been employed on the large estates in the neighborhood where so many slaves were owned, making it very profitable. Now, of course, *that* is lost, and the fortunes of his other patrons are so reduced they never call in a physician unless compelled." MS. in possession of Mrs. M. R. Turnbull of Richmond.

[8] Hayden: Virginia Geneaologies, p. 216. Personal communication from Charles A. Carmichael of Fredericksburg.

[9] Hayden: Virginia Genealogies, pp. 696-735.

[10] Virginia Magazine of History and Biography, v. 8, p. 63. Hayden: Virginia Genealogies, p. 735.

(1783-) and Gustavus Richard. Gustavus Richard Alexander Brown (1790-1835), grandson of Reverend Richard Brown, was born in Alexandria, Virginia, studied medicine at the University of Pennsylvania, and returned to Alexandria to practise until his removal to Kentucky in 1825. Gustavus Alexander Scott Brown (1806-1835), a grandson of Dr. William Brown, was a graduate of the Winchester Medical College and a practitioner both in Winchester, Virginia, and in Charles County, Maryland.[11]

Closely related to the Browns were the Horners of Warrenton. Gustavus Brown Horner (1761-1815), grandson of the immigrant, Dr. Gustavus Brown of Maryland, after serving in the Continental army and studying medicine under his cousin William Brown of Alexandria, settled at Warrenton, practised medicine, and raised a large family. One of his sons was Frederick Horner (1806-1881), a graduate in medicine of the University of Pennsylvania, who spent the last forty years of his life in practice in Warrenton. Two of Frederick's first cousins were physicians: William E. Horner (1793-1853), the distinguished professor of anatomy at the University of Pennsylvania, and his brother, Gustavus Richard Brown Horner (1804-), who won a name for himself in the medical service of the navy and retired in 1871 with the rank of commodore. Frederick Horner (1828-), a nephew of the earlier Frederick, was another naval surgeon. He retired in 1861, but served in the hospital service in Washington during the Civil War. After 1865 he lived on his Fauquier estate, practising medicine and writing articles for the medical journals.[12]

John Moncure Daniel (1769-1813) was born in Stafford County and after study in Scotland entered the United States army medical service in 1809, was a surgeon in the War of 1812, and at the time of his death in 1813 was senior hospital surgeon. John Moncure Daniel of Stafford County (1800-1845), a graduate in medicine in 1822 from the University of Maryland, was his son.[13] John Henry Moncure Daniel, another son, was born the day of his father's death. A graduate in medicine from the University of Pennsylvania in 1837, he probably practised in Fredericksburg. His cousin, Jesse Mickelborough Daniel (1817-1879), was educated at the University of Virginia, as was John Mickelborough Daniel (1838-), another cousin.

Corbin Braxton, who married Mary Tomlin and lived in King William County, combined politics with medicine, being state senator in 1838 and a member of the Convention of 1851. One of his sons, William Armistead Brax-

[11] Hayden: Virginia Genealogies, pp. 151-194.
[12] Hayden: Virginia Genealogies, pp. 186-197.
[13] Hayden: Virginia Genealogies, pp. 308, 309, 310, 315.

ton, born 1824, served as a surgeon in Mosby's command and died of wounds, November 16, 1864. Another son, Tomlin Braxton of "Chericoke," was also a physician. Dr. William P. Braxton of Hanover County, born about 1822, was a nephew of Corbin.[14]

Thomas Ball (1775-1814) was a graduate in medicine from the University of Pennsylvania in 1796, served as surgeon's mate in the War of 1812, and died of one of the epidemic diseases of the army in 1814.[15] Dr. William Ball, born before 1740, the last of the Balls to own "Millenbeck" in Lancaster County, was a cousin. James Kendall Ball (1790-1836) was another cousin, who also served in the War of 1812 and lived at "Edgewood" in Lancaster County. Charles Burgess Ball (1793-1823) was a graduate of the University of Pennsylvania in 1812 and practised in Leesburg, Virginia. He was named for his half-brother, Burgess Ball (b.1773), who died of yellow fever while a medical student in Philadelphia in 1793. Spencer Mottram Ball (1793-), surgeon in the United States army, was a nephew of Mottram Ball (1767-1842), a graduate of the University of Glasgow, who practised in Northumberland and Fairfax Counties and was said to be "a striking example of the saying of Dr. Boerhaave that the poor were his best patients, for God was their paymaster."[16] Spencer Mottram Ball (1826-1888) moved to Mississippi, graduated from the University of Louisiana in 1851, and practised in Greenwood, Mississippi.[17] All of these were direct descendants of the first William Ball, who came to Virginia in the Seventeenth Century and was the grandfather of Mary Ball Washington.

There have been many Fauntleroy physicians in Virginia from the time of Dr. Moore Fauntleroy (1743-1802), who studied at Aberdeen and Edinburgh and lived in Essex County. Nephews of Moore Fauntleroy were Dr. John Foushee Fauntleroy and Dr. Henry Fauntleroy of Richmond County, who died in 1859. Archibald Magill Fauntleroy, a great-nephew, after graduating from the Virginia Military Institute and serving as surgeon in the Confederate States army, was for many years superintendent of the Western Lunatic Asylum at Staunton. On his mother's side he was a nephew of Dr. Alfred T. Magill, who succeeded Dunglison as professor of medicine at the University of Virginia in 1833.[18] Moore Gardner Fauntleroy and Samuel Griffin Fauntleroy, both physicians, were brothers, natives of King and Queen County in the early Nine-

[14] Virginia Historical Magazine, v. 1, p. 42.
[15] Hayden: Virginia Genealogies, p. 70.
[16] Hayden: Virginia Genealogies, p. 136.
[17] Hayden: Virginia Genealogies, pp. 103, 116, 129, 135, 142.
[18] Cartmell: Shenandoah Valley Pioneers, p. 451.

teenth Century. Each had a son by the name of Samuel Griffin Fauntleroy who was a physician. Claybrooke Fauntleroy, grandson of the earlier Samuel Griffin, was a graduate of the University of Pennsylvania and lived at Dragonville, King and Queen County.[19]

A long line of Andersons were physicians. Thomas Bates Anderson (1792-1872) was the first in this country. He graduated in medicine from the University of Pennsylvania, settled in Hanover County, served in the War of 1812, and was generally recognized as a man of unusual parts. His son, L. B. Anderson, followed in his footsteps and is remembered as the author of a little book of medical biographies printed in Richmond in 1889. A grandson, Hermann B. Anderson, of Verdon, Hanover County; two brothers, John M. Anderson, who settled in Texas, and Horace F. Anderson, who settled in Tennessee; three nephews, Monroe W. Anderson who went to Kentucky, Zebulon M. P. Anderson who went to Texas, Clopton Anderson who went to Tennessee; and the cousins Archibald Anderson, Matthew T. Anderson, Matt Archy Anderson, John B. Anderson, Abner W. Clopton, and John G. Trevilian, all practised medicine.[20]

A number of Baldwin physicians were prominent in Winchester in the Nineteenth Century. Cornelius Baldwin (1751-1827), a native of New Jersey, who studied medicine in Philadelphia, settled in Winchester after serving in the Revolution as a surgeon. Among his eleven children were three physicians: Cornelius E. Baldwin (1791-1828), Robert T. Baldwin (1793-1863), who was a surgeon in the War of 1812, and Archibald Stuart Baldwin (1797-1870). The last two married sisters—daughters of Dr. Robert Mackey, another prominent Winchester physician. All three had sons who became doctors. Isaac Hite Baldwin, surgeon U. S. N., and Robert T. Baldwin II, surgeon C. S. N., were sons of Cornelius E. Baldwin. Robert T. Baldwin, Sr., who was appointed sheriff of Frederick County in 1851, had a son, Robert, M. D. Archibald Stuart Baldwin's physician sons were John (d.1862), Cornelius, and Robert Frederick. Still another grandson of the first Cornelius Baldwin was Dr. Briscoe Baldwin Donaghe.[21] Robert Frederick Baldwin (1830-1879) was a graduate of the University of Pennsylvania and a Confederate States surgeon. From the close of the war until his death he served as superintendent of the Western Lunatic Asylum.[22]

[19] Virginia Historical Magazine, v. 1, pp. 7, 8, 9.
[20] Anderson: Brief Biographies of Virginia Physicians, pp. 91, 92.
[21] Cartmell: Shenandoah Valley Pioneers, p. 258. Peyton: History of Augusta County, pp. 323-325.
[22] Tyler: Cyclopedia of Virginia Biography, v. 4, p. 529.

Another important family of physicians was the Galts. Samuel, John Minson, and Patrick were prominent in and around Williamsburg before 1800. After that we encounter Alexander D. Galt (1777-1841) and his son, John Minson Galt II (1819-1862), physicians to the insane asylum at Williamsburg; John M. Galt of the Confederate States army and his son, Francis Land Galt of the Confederate States navy attached to the *Alabama;* James Dickie Galt (1829-1888) of Norfolk, son of Alexander Galt, apothecary of Norfolk; Gabriel Alexander Dickie Galt (1834-1908), who invented a new method of trephining; and William C. Galt of Kentucky, son of John Minson Galt. Norborne Galt, the son of William C. Galt, was the father of William Galt, also of Kentucky, and the grandfather of John M. Galt of Texas.[23]

Among the Dews of King and Queen County there were several who practised medicine. Early in the Nineteenth Century there was William Dew. His two nephews, J. Harvey Dew, a graduate of the University in 1868 who later moved to New York City, and Philip A. Dew, as well as his grandson, H. W. Dew of Lynchburg, were all physicians.[24] Roderick Dew and T. Welch Dew, both graduates of the Medical College of Virginia, practised in Spotsylvania County.

The Mettauer family ran to medicine. Beginning with the French army surgeon, Francis Joseph Mettauer, who settled in this country, three succeeding generations witnessed unusual doctors—in his sons, Francis Joseph Mettauer, Jr., and John Peter Mettauer; and in John Peter's sons, Francis Joseph, Henry Archer, and Edward Mumford Mettauer.

In Norfolk Dr. William Boswell Selden (1773-1849) received from Dr. Jenner himself in 1799 vaccine virus from which he kept up a supply for fifty years. In the use of Cinchona bark, in his management of typhoid fever, and as an accoucheur he enjoyed an enviable reputation. Two of his sons were physicians. William Selden (1808-1887), a graduate of the University of Pennsylvania and a student in London and Paris, was long a prominent member of the Virginia profession. He served as a surgeon in the Confederate army, was twice elected vice-president of the Medical Society of Virginia, and after passing through the yellow fever epidemic of 1855 headed a committee of physicians which investigated and reported upon it.[26] His brother, Dr. Henry Selden (1817-1855), who also graduated at the University of Pennsylvania and spent

[23] Personal communication from Miss Mary Meares Galt of Washington, D. C.
[24] Bagby: King and Queen County, Virginia, pp. 292-293.
[25] Transactions of the Medical Society of Virginia, 1899.
[26] Kelly and Burrage: Dictionary of American Medical Biography, p, 1091.

three years studying in Paris, lost his life in the same epidemic of yellow fever.[27] Samuel Selden, also a native of Norfolk, died there in January 1880 in his forty-sixth year.

Dr. John Brockenbrough was buried at Doctor's Hall in Richmond County in November 1801. Of his five gifted sons two were physicians: John, who moved to Richmond, built the house which became the White House of the Confederacy, and for thirty-eight years was president of the Bank of Virginia; Austin, who remained in Tappahannock, and besides practising medicine served in the House of Delegates in 1820 and 1824. His son, Dr. William Austin Brockenbrough (1809-1858), married Mary Carter Gray, the daughter of Dr. Thomas B. W. Gray of Tappahannock.[28]

General Walter Drew McCaw, retired army surgeon, traces his descent from four generations of physicians. His father, James Brown McCaw (1823-1906), author, teacher, and Confederate States surgeon, was for many years a prominent figure in Richmond. His grandfather, William R. McCaw, his great-grandfather, James D. McCaw, and his great-great-grandfather, James McCaw, were all in their day well-known physicians of the state.[29]

A number of Cabell physicians have been prominent in Virginia since the time of Dr. William Cabell (1700-1774), the founder of the Cabell family in this country. Three of his grandsons were doctors. George Cabell, Sr. (1766-1823), a student at Hampden-Sidney Academy, a graduate in medicine of the University of Pennsylvania, a friend and physician to Patrick Henry, lived and practised all his life near Lynchburg. His brother, John Jordan Cabell (1772-1834), was also a graduate in medicine from Philadelphia and a physician of Lynchburg, who owned large holdings in land, a store, and one or two political papers. He was one of the first converts in Virginia to Swedenborg's teachings. In 1830 he moved to his salt works in Kanawha County, where he died four years later. Their cousin, George Cabell, Jr. (1774-1827), studied medicine under George Cabell, Sr., and took his degree from the University of Pennsylvania. He practised in Lynchburg with his brother-in-law, Dr. William B. Hare, until 1804 and with Dr. Southall between 1816 and 1817 prior to moving to Richmond. He was a prominent Mason and died in 1827.

Nine great-grandsons of William Cabell were physicians. James Lawrence Cabell (1813-1889), son of George Jr., was long a distinguished professor of surgery at the University of Virginia. Robert Bolling Cabell (1787-1808) lived

[27] Virginia Medical and Surgical Journal, 1855, v. 5, p. 425.
[28] Virginia Magazine of History and Biography, v. 6, pp. 83, 84. William and Mary Quarterly, 1902-1903, v. 11, p. 125.
[29] Kelly and Burrage: Dictionary of American Medical Biography, p. 771.

and practised in Chesterfield. Landon R. Cabell graduated from the University of Pennsylvania in 1822, married his cousin Marion F. Cabell in 1829, and practised first in Lynchburg and later in Richmond. Robert Henry Cabell (1799-1876) was born at Springhill, Nelson County, studied at William and Mary College and graduated in medicine from the University of Pennsylvania in 1821. Settling in Richmond, he married Julia Mayo, sister of General Winfield Scott's wife. Between 1827 and 1829 he studied in Europe. After his return to Richmond he took an active part in the epidemic of smallpox in 1831. He was appointed to the chair of surgery in the Medical College of Virginia on the death of Professor Augustus L. Warner, but declined to serve. An opponent of secession, at the outbreak of the war he moved to Milwaukee, where he owned property, later living in Baltimore and dying there. Robert Gamble Cabell (1809-1889) was born in the old Gamble house in Richmond, studied at William and Mary College, and graduated in medicine from the University of Virginia in 1833. Postgraduate work in Philadelphia and Baltimore fitted him for his long and successful career in Richmond. When he died "he was by long odds the oldest practicing physician in the city." His brother John Grattan Cabell (born 1817), after attending Washington College and the University of Virginia, began his medical course at the University and graduated in medicine in 1841 from the University of Maryland. A year's study in Europe preceded his return to Richmond to practise. He served in the Confederate army, first as a lieutenant-colonel of cavalry, finally as medical director of the third division of the Jackson Hospital in Richmond. After the war he entered into partnership with Dr. F. W. Hancock and for a number of years was president of the city board of health. John Breckenridge Cabell, a son of George Cabell, Sr., practised in Lynchburg before moving to Lewisburg, West Virginia, where he died some time after 1879. Hector Horsley was the eighth great-grandson physician. He was descended from the founder through Dr. William Cabell's daughter Mary, who married William Horsley. The ninth was Landon Cabell Rives (1790-1870), who became a distinguished physician in Cincinnati and had two sons who studied medicine.

Other members of the Horsley family descended from William Cabell were physicians. Samuel Cabell Horsley studied at Washington College between 1804-1806 and became a surgeon in the United States navy, serving in the War of 1812. Rescued from Perry's flagship when it went down in the battle of Lake Erie, he continued in the service until his death in 1828. His nephews who studied medicine were William N. Horsley (b.1829), a graduate of the Medical College of Virginia in 1852 and a captain in the Confederate States army;

William Andrew Horsley (1815-1887), a graduate of the University of Virginia in 1837 and the medical department of the University of Pennsylvania in 1841, and a practitioner of New Market; and Frederick Cabell Horsley, born February 22, 1822, a graduate of Washington College and the medical department of the University of Pennsylvania. John Shelton Horsley, surgeon of Richmond, is a son of John Horsley, the brother of William and Frederick.

Many other descendants of William Cabell became physicians. Among them were Sears Cabell, John Roy Cabell, Aylett J. Cabell, George Kuhn Cabell, Robert Gamble Cabell, Jr., William C. Cabell, Benjamin W. Cabell, Benjamin Cabell Megginson, the brothers Benjamin Cabell Meredith and Thomas Jefferson Meredith, J. Cabell Meredith, Patrick Henry Clark, William Allen Carrington, the brothers Paul Jones Carrington and Walter Coles Carrington, Reid C. Carrington, Thomas Satterwhite, and Reid White. Their delightful if complicated family relationships are set forth in that valuable contribution to genealogy, *The Cabells and Their Kin.*[80]

The Claibornes and Feilds of Petersburg and Brunswick, the Griffins of Gloucester and Roanoke County, the Lewises, and the Shields were all families inclined toward medicine.

[80] Brown: The Cabells and Their Kin.

CHAPTER XVIII

CONTRIBUTIONS TO THE MEDICAL ANNALS OF OTHER STATES

I. VIRGINIA PHYSICIANS IN THE WEST

VIRGINIA peopled the West. From the earliest days an incessant migration went from the Old Dominion, so that in time many of her best and bravest had transferred their allegiance to other states. Not the least of that great group were the early doctors, who in many cases excelled their Eastern brothers in boldness, invention, and accomplishment. Their remarkable pioneer medicine reflects glory on Virginia.

This was particularly true in Kentucky. A part of the original domain of Virginia, settled by Virginians, and given to the Union in 1792 by Virginia, Kentucky was in every sense "the child of another commonwealth." Here two friends, Virginia-born and bred, made their names as physicians.

Ephraim McDowell (1771-1830) was the father of ovariotomy and the founder of abdominal surgery. His family had for several generations occupied frontier land in Rockbridge County, and the boy was born in the vicinity of Fairfield, a few miles northeast of Lexington, Virginia, on November 11, 1771. Here he went to school until his thirteenth year, when his father, Samuel McDowell, who had fought in the Revolution and represented Augusta County at Williamsburg, was sent by the Virginia Assembly as one of its commissioners to the District of Kentucky, then a part of Virginia. While the father became prominent in Kentucky politics, the son went to school at Georgetown, Kentucky. Before his nineteenth year he returned to Virginia to become an apprentice in medicine to Dr. Alexander Humphreys of Staunton, a graduate of the University of Edinburgh and the best known surgeon of that community. Studying with Dr. Humphreys at the same time was Samuel Brown, who afterwards became McDowell's brother-in-law. After two years in Staunton the young men sailed for Edinburgh in search of further knowledge. Fellow students of theirs in the Scotch capital at this time were John Brockenbrough, David Hosack, and John B. Davidge. Samuel Brown remained McDowell's intimate companion, and the two passed pleasant summers on pedestrian tours of the Highlands. Brown once remarked with humorous candor that McDowell "went to Scotland a goose and returned a gander."

McDowell did not graduate. Returning to Kentucky in 1795 he rapidly became the foremost surgeon of that undeveloped territory. In 1809, fourteen years after beginning practice, he performed on Mrs. Jane Todd Crawford the operation that made him famous. Without anæsthetics, antisepsis, or trained help, through a nine-inch incision in the left side, he exposed, delivered, and ligated in twenty-five minutes a tumor of the ovary weighing twenty-two and one-half pounds, and in five days returned to find his patient "engaged in making up her bed." When he had repeated this operation twice successfully he reported his cases.[1] After this his life was as eventful as any backwoods surgeon's could have been, for in addition to performing the operations customary at that time—lithotomy, amputation, tracheotomy, and the liberation of strangulated hernia—he succeeded in adding to his earlier ones many other cases of ovariotomy. By the time of his death in 1830 he had performed this operation twelve or thirteen times. One of his biographers says that "the influence of his life is only fully realized when we compare his achievements with that of vaccination, anæsthesia, and the Listerian doctrine of surgery."[2]

Samuel Brown likewise came from Augusta County. He was born on January 30, 1769, the child of the Reverend John Brown, a Presbyterian minister, and Margaret Preston, his wife. His father had founded a grammar school for the education of his own sons and the sons of his friends, and here Samuel got his early education. For further study he went to Dickinson College in Pennsylvania, where he received his Bachelor of Arts degree. He returned to Virginia and began to read medicine under Dr. Humphreys of Staunton. A brief period of study under Benjamin Rush followed before he joined McDowell at the Edinburgh School of Medicine. Brown like McDowell returned to America without graduating. He practised first in the neighborhood of Washington, then in New Orleans and Alabama, and finally settled in Kentucky. In 1799 he contributed to the *American Medical Repository* the first medical paper from a Kentucky physician: *A Curious Instance of Disease in which the Feeling of the Patient was Abolished while the Power of Motion Remained Unimpaired.* He was a pioneer vaccinator, for by 1802, four years after Jenner's discovery and while the first attempts were being made in the larger cities of the East, he had vaccinated more than five hundred people.[3]

[1] Eclectic Repertory and Analytical Review, 1817, v. 7, p. 242. Republished in American Journal of the Medical Sciences, 1845, v. 9, p. 261.
[2] Schachner: Ephraim McDowell.
[3] Abell: A Retrospect of Surgery in Kentucky, p. 50.

Brown was the founder of a society known as the Kappa Lambda Association of Hippocrates,[4] by whose strict oath, corresponding to that of the Father of Medicine, and by the organization of component societies elsewhere, much was done to elevate the tone of medical practice. The Association published in Philadelphia in 1825 the *North American Medical and Surgical Journal*. Dr. Brown, who for a long time taught in Transylvania University, was made professor of medicine in 1819 but resigned in 1825 in favor of his friend, Daniel Drake, with whom he had previously coöperated in establishing a medical school in Cincinnati. Besides his medical work, Brown is said to have introduced lithography into this country and was a contributor to the *Transactions of the American Philosophical Society*. He died of apoplexy, January 12, 1830.[5]

Bernard G. Farrar (1785-1849) was born in Goochland County, Virginia, July 4, 1785. Both his father, Joseph R. Farrar, and his mother were married four times and with each marriage there were children. It was with little paternal help, therefore, that young Farrar began life in the West after his father had moved from Virginia. He began the study of medicine under Virginia-born Samuel Brown of Kentucky and graduated from Transylvania University in 1804. He determined to try his fortune west of the Mississippi and was soon established in St. Louis—the first American-born physician in that vast country. He served in the war of 1812 and was the first president of the St. Louis Medical Society. He was highly regarded as obstetrician, surgeon, and general practitioner until he fell a victim of cholera in 1849.[6]

Another early physician of St. Louis to claim Virginia as his birthplace was Moses Montrose Pallen (1810-1876), son of a Polish officer under Napoleon who emigrated to Virginia in 1800. Pallen was born in King and Queen County, April 29, 1810, and was educated at the University of Virginia. In 1842 he went to St. Louis, where he became prominently identified with the practice and teaching of obstetrics. For twenty years he was professor of obstetrics in the St. Louis Medical College and was an effective and conscientious teacher. He was honored with the presidency of the St. Louis Academy of Science and the St. Louis Medical Society. He died September 25, 1876.[7]

[4] The New York Branch of the Kappa Lambda Association of Hippocrates was one of the forerunners of the New York Academy of Medicine. Dr. A. C. Post said of it in 1848: "There have been but two or three members who have disgraced themselves by practising the base arts of quackery and imposture and sacrificing their professional honor at the shrine of Mammon." Walsh: History of Medicine in New York, v. 3, p. 676.

[5] Kelly and Burrage: Dictionary of American Medical Biography, p. 157.

[6] Goodwin: A History of Medicine in Missouri.

[7] Kelly and Burrage: Dictionary of American Medical Biography, p. 932.

John Taylor Temple (1803-1877) was born at Bear's Garden, King William County, Virginia, May 5, 1803. On one of the estates of his family the surrender of Cornwallis occurred. Temple was a graduate of Union College, New York, and studied medicine first in Philadelphia and later at the University of Maryland. After his marriage in 1824 he returned to Virginia, practising near Richmond for two years. A series of migrations took him to Philadelphia, Washington, Chicago, and St. Louis. In Chicago he made a name for himself as an educator, as a member of the first health board, as the erector of the first frame building, and as the first to perform an autopsy. He was one of the original trustees of Rush Medical College. His arrival in St. Louis in 1842 was a signal for a complete reversal of his medical theories. Turning to homeopathy, he secured a charter for the Homeopathic Medical College of Missouri and became its dean. He died February 24, 1877.[8]

Another Virginia-bred physician to stray into homeopathy was William Henry Holcombe (1825-1893), born in Lynchburg, May 29, 1825, the grandson of Colonel Holcombe of Revolutionary fame. After a year's study at Washington College he moved West with his family. In 1847 he took his medical degree from the University of Pennsylvania. After practising in Ohio and Mississippi he settled in New Orleans. Here he became a convert to homeopathy in 1874, serving as president of the American Institute of Homeopathy. The slant of his thinking is reflected in his writings, which include *Sexes Here and Hereafter, Our Children in Heaven, The Other Side, The End of the World,* and *Condensed Thoughts About Christian Science.* He died in 1893.[9]

William Andrew Byrd (1843-1887) achieved distinction as an early appendectomist in Illinois, publishing in 1881 a paper on *Abdominal Section in the Treatment of Ulceration and Perforation of the Caecum and Appendix Vermiformis.*[10] He was born in Bath County, Virginia, October 3, 1843. He graduated from the Missouri Medical College in 1867, moved soon afterwards to Illinois, and acquired considerable reputation as a surgeon, lecturing on this subject in his Alma Mater one month a year. A founder of the American Surgical Association, he was honored by office in various other medical societies in which he held membership. He died suddenly in his forty-fourth year.[11]

Thaddeus Asbury Reamy (1829-1909), native of Frederick County, Virginia, was the son of Jacob and Mary Bonifield Reamy. With little previous education he was sent to Starling Medical College by his father, who had moved to Ohio

[8] Kelly and Burrage: Dictionary of American Medical Biography, p. 1192.
[9] Kelley and Burrage: Dictionary of American Medical Biography, p. 578.
[10] Transactions of the American Medical Association, 1881, v. 32, p. 433.
[11] Journal of the American Medical Association, 1887, v. 9, p. 511.

in 1832. Endowed with energy, quickness of mind, and ambition, Reamy did much to advance the practice of obstetrics in Ohio. He taught obstetrics in his Alma Mater and in the Cincinnati Medical College and the Medical College of Ohio, and is said to have held the first clinic in obstetrics ever given in a college amphitheatre in this country. He introduced new and improved methods in the study and care of lying-in women, was president of the American Gynecological Society in 1886, and was honored with an LL. D. by Cornell. He died in 1909.[12]

II. VIRGINIA PHYSICIANS IN PENNSYLVANIA

In order to attract Southern students the medical schools of Philadelphia are said to have employed a large number of Southern professors. The Virginia profession, while bitterly condemning the situation, repeatedly acknowledged that some of the ablest Virginians of their day occupied professorships in the University of Pennsylvania and Jefferson Medical College.

John Kearsley Mitchell (1793-1858) was born in Shepherdstown, Virginia, May 12, 1793. At an early age he was sent by his father to Scotland for an education. By 1813 he was back in this country, reading medicine under Dr. Kramer of Jefferson County, Virginia. His preliminary studies over, he entered the medical department of the University of Pennsylvania and was graduated in 1819. He remained in Philadelphia to teach the institutes of medicine and physiology in the Philadelphia Medical Institute, 1824, chemistry in the Franklin Institute, 1833, and theory and practice of medicine in Jefferson College, 1841. He is remembered not only as the father of Wier Mitchell, neurologist and writer, but in his own right as the author of a volume of poetry, popular lectures, and essays, as well as of articles dealing with medicine. He was the "first to describe the spinal arthropathies" (1831), and his essay on fevers (1849) has been called "the first brief for the parasitic etiology of disease on *a priori* grounds." He was twice the recipient of medals from the city of Philadelphia for his services in times of pestilence. He died in Philadelphia, April 4, 1858.[13]

Nathaniel Chapman (1780-1853), son of George Chapman, was born at Summer Hill on the Potomac, Fairfax County, Virginia, May 28, 1780, of a family of Scotch-English ancestry who had long lived in that community. After attending school at Alexandria Academy he commenced the study of medicine under Dr. Weems of Georgetown and Dr. Dick of Alexandria. His medical

[12] Kelly and Burrage: Dictionary of American Medical Biography, p. 1016.
[13] Kelly and Burrage: Dictionary of American Medical Biography, p. 853.

education was continued in Philadelphia as the private pupil of Dr. Rush and later at the University of Pennsylvania, where he graduated in 1800. After three years' additional study in Edinburgh and London, he returned to this country and settled in Philadelphia. For many years his "great personal charm, exuberant vitality and acute sense of humor," made him easily the most distinguished physician of his day. He became professor of materia medica in the University of Pennsylvania in 1813 and three years later succeeded to the chair of theory and practice of medicine. Chapman enjoyed great popularity as a teacher. He had discarded the theories of Brown and Rush and returned to the older philosophies of medicine. His own teaching revolved around two essential doctrines. The first was that of the "association between the organs and systems of the body in health and disease"—an idea probably derived from the writings of William Cullen and the French School. The second was the importance of the stomach in the causation of diseases. To him that organ was the *fons et origo* of most human ills. The gastric origin of fever was one of his firm beliefs, holding as he did that most gastric disturbances were inflammatory. In 1820 Chapman began the publication of the *Philadelphia Journal of the Medical and Physical Sciences,* dedicating the first issue to that venerable fellow-Virginian, James McClurg. In 1827 this publication became the *American Journal of the Medical Sciences* and as such has continued to the present day. A public dinner was given in Chapman's honor when he visited Richmond in May 1833. He was chosen the first president of the American Medical Association, by acclamation (1847). He died July 1, 1853, a "self possessed, deliberate and emphatic" man, happy in the possession of unusual wit and humor, and commanding to a unique degree the attention of his students and the admiration of his fellow practitioners.[14]

William Edmonds Horner (1793-1853) attained distinction as an anatomist, succeeding Philip Syng Physick in the chair of anatomy at the University of Pennsylvania in 1831. An enthusiastic investigator he described in 1822 for the first time a muscle on the posterior surface of the lacrymal duct and sac which controls the flow of tears into the nose.[15] First called by him the *tensor tarsi* it has become known to subsequent anatomists as *Musculus Horneri.* He was among the first to make practical use of the microscope, one of the valuable results of which was his demonstration of the fact that the rice-water stools of cholera contained fragments of the epithelium of the small intestines, much of

[14] Biddle, J. B.: Nathaniel Chapman, in Gross's Lives of Eminent American Physicians and Surgeons, p. 663. Carson: History of the Medical Department of the University of Pennsylvania, p. 172.

[15] London Medical Repository, 1822.

which is stripped away in this disease.[16] With great industry and skill he collected a large number of anatomical specimens, which he later gave to the University. In acknowledgement of this liberal bequest the trustees voted that the anatomical collection in the future should be called the Wistar and Horner Museum. His writings consisted, in addition to numerous articles, of an edition of *Wistar's Anatomy,* 1823, *United States Dissector,* 1826, *A Treatise On the Special Anatomy of the Human Body,* 1826, *A Plate of the Fœtal Circulation,* 1828, and *A Treatise on Pathological Anatomy,* 1829.

Horner was born at Warrenton, Virginia, June 3, 1793, the grandson of Robert Horner, who had emigrated from England to Maryland and later to Virginia. He was educated first under the Rev. Charles O'Neill of Warrenton and in 1809 began the study of medicine at Dumfries with Dr. John Spence, one of the best known Virginia physicians at that time, a Scotchman and a graduate of the University of Edinburgh. He continued with Dr. Spence until 1812. From 1813 to 1815 he divided his time between the duties of a surgeon's mate in the United States army and a student of medicine in the University of Pennsylvania, where he received his degree in 1814. After the war he returned to Warrenton, but his sojourn was brief and he was soon back in Philadelphia, where his "enthusiasm for anatomy, his earnest application to dissection, his quiet demeanor, his steadiness of character, the neatness and elegance of his preparations, had attracted the notice of Prof. Wistar," and set him on the road to success.[17]

Joseph Hartshorn (1779-1850), the father of Edward and Henry Hartshorn, both of whom attained eminence as physicians in Philadelphia, was born on December 12, 1779 in Alexandria, Virginia, the son of William Hartshorn and Susanna Saunders. William Hartshorn was a friend of Washington's and for a number of years acted as secretary and treasurer of the Potomac Navigation Company, of which Washington was president. Young Joseph, handicapped by lameness, began life in his father's counting house, but his interests shortly turned to medicine, which he began to read under James Craik. As resident apprentice and apothecary in the Pennsylvania Hospital he further prepared himself for the study of medicine in the University of Pennsylvania, from which he graduated in 1805. Business came slowly to the young man, as it has come to many others, but though urged by his father to return to Virginia and live at the old homestead he resolutely refused, declaring that he would never come

[16] American Journal of the Medical Sciences, 1835, v. 16, pp. 58, 277. His observations were made during the epidemics of 1832 and 1834.

[17] Jackson, Samuel: A discourse commemorative of the late William E. Horner, M. D., 1853. Carson: History of the Medical Department of the University of Pennsylvania, p. 182.

back "until he had bank notes enough to paper the walls of the best room at Strawberry Hill." He lived to realize this ambition. As surgeon to the Pennsylvania Hospital he enjoyed a preëminence that carried him to the heights of a richly deserved success. He died August 20, 1850.[18]

Robert Mendenhall Huston (1795-1864) was born at Abingdon, Virginia, May 19, 1795, the son of William and Elizabeth Mendenhall Huston. His medical education was received at the University of Pennsylvania, from which he graduated in 1825 with a thesis entitled *Hemorrhoids*. His reputation was made chiefly as an author and in the specialty of obstetrics. He was professor of obstetrics and diseases of women and children in Jefferson Medical College from 1838 to 1841 and of materia medica and therapeutics for the next sixteen years. For a long time he was dean of the faculty. He was coeditor of the *Medical Examiner*, 1844-1848, and edited the American edition of Churchill's *Theory and Practice of Midwifery*, 1843. He died August 3, 1864.[19]

Joseph (1853-1911) and Mordecai Price (1844-1904), two brothers from Rockingham County, Virginia, went North at early ages for their education, graduated in medicine from the University of Pennsylvania, and settled in Philadelphia. Both became outstanding gynecologists and abdominal surgeons. Mordecai, the elder of the two, was not as colorful a character as Joseph, whose humor, warm heart, and genius for friendship, combined with rare surgical acumen, made him easily one of America's leading surgeons of the period. His friends dubbed him "the Lawson Tait of America." The master of a simple technique, his active brain and nimble fingers could grapple with almost any surgical problem in the abdomen. Though he scoffed at germs and antiseptics, he nevertheless preached and practised asepsis. In the surgical treatment of fibroid tumor, pelvic infections, extra-uterine pregnancy and ovariotomy he excelled. "He made common and safe the radical operation for the treatment of pelvic suppurations, and taught men in this country how to operate with clamp, *serre noeud*, pins, and external treatment of the stump, and so made hysterectomy for fibroid tumors a safe operation instead of a most dangerous one."[20]

He inaugurated a new era in this country, and though he held no professorship he is said to have taught more men how to do pelvic and abdominal surgery than any other man in America. Always entertaining an affectionate regard for his native state, he was generous in proffering both counsel and services. Many early Virginia hospitals were supplied with trained nurses through his help,

[18] Kelly and Burrage: Dictionary of American Medical Biography, p. 537.
[19] Kelly and Burrage: Dictionary of American Medical Biography, p. 624.
[20] Kelly and Burrage: Dictionary of American Medical Biography, p. 992.

and he operated regularly each year in Petersburg, where his coming was an event to which the whole faculty looked forward.

III. VIRGINIA PHYSICIANS IN NEW YORK

Ferdinand Campbell Stewart (1815-1899) was the son of Ferdinand Stewart Campbell, for twenty years professor of mathematics in the College of William and Mary. In 1830 Professor Campbell fell heir to certain estates in Scotland which caused him to change his surname from Campbell to Stewart and become a British subject. His wife was a daughter of Samuel Griffin, colonel in the Revolution and member of Congress at the same time that his brother, Cyrus, was president of the Congress. Young Ferdinand received his academic education at William and Mary, studied for a while in Scotland, returned to Philadelphia, and took his M. D. degree from the University of Pennsylvania in 1837. Further study took him back to Europe, where for a while he was assistant in the office of John Thompson, Surgeon General of the British army at Waterloo and holder of the chair of surgery in the University of Edinburgh. Returning to this country Stewart began practice in New York City. The preliminary meetings of the New York Academy of Medicine, organized in 1847, were held in his office and he became its first secretary. For a number of years he was attending physician at Bellevue Hospital, where he taught private pupils and which he helped reorganize. In 1849 he became physician to the Marine Hospital on Staten Island. In 1855 he moved to Europe. He died at Pisa, Italy in 1899.[21]

John Herbert Claiborne, Jr., (1861-1922) was the son of Sarah Alston and John Herbert Claiborne, who was a surgeon in the Civil War and a promient member of the Medical Society of Virginia. The son was born in Petersburg, June 29, 1861.[22] His youth was passed in Virginia, first as a student in the University School of Petersburg under William Gordon McCabe and later in the academic department of the University of Virginia. Transferring to the medical department he was graduated in 1883. Subsequent study followed at Bellevue Hospital Medical College, at the New York Polyclinic, and in Berlin and Paris. Returning to New York he opened an office as an eye specialist and soon became a recognized authority in his field. He taught ophthalmology in both the Columbia and Cornell Medical Schools and was on the staff of the

[21] Kelly and Burrage: Dictionary of American Medical Biography, p. 1165. Walsh: History of Medicine in New York, p. 677.

[22] Walsh, in his History of Medicine in New York, p. 254, says Claiborne was born in Louisburg, North Carolina.

New Amsterdam Eye and Ear Hospital and the Flushing Hospital. Several of his contributions to the literature of ophthalmology are considered of value. During the Spanish-American War he enlisted in the Twelfth Regiment of New York Volunteers, became a captain in the line, and afterwards wrote a brochure, *Four Months at Camp Thomas,* on the sanitary situation in Chickamauga Park during the summer of 1898.[23]

William Rice Pryor (1858-1904), son of Roger A. Pryor, distinguished minister to Greece, member of Congress, and brigadier general in the Confederate army, was born in Richmond in 1858. After his preliminary education in Virginia he went to Princeton University and later to the College of Physicians and Surgeons in New York. His first appointment after his graduation in 1881 was as assistant gynecologist to the New York Polyclinic (1886). In 1895 he became professor of gynecology. He also served on the staffs of the Charity and St. Elizabeth's Hospitals. His *Textbook of Gynecology* (1903) was an excellent exposition of the principles of this specialty, to which the author had contributed improved methods of treating retroversion of the uterus and vaginal hysterectomy. Numerous articles by him dealing with the various phases of his specialty appeared from time to time in medical literature. He died in New York, August 25, 1904, a man "of fine presence and cordial manners, and of enthusiasm."[24]

John William Draper and his two sons, John Christopher and Henry, all three physicians of reputation, were identified with Virginia. The older son was born in Mecklenburg County, where his father practised medicine before becoming professor of chemistry at William and Mary, and the second son was born in Prince Edward while his father occupied the same chair at Hampden-Sidney. In 1840 Dr. Draper accepted a professorship in the University of the City of New York. Here both his sons studied and graduated in medicine, going abroad for postgradutae work and serving on the staff of Bellevue Hospital. John Christopher (1835-1885) became professor of chemistry in various New York institutions—the University of New York, Cooper Union, and the College of the City of New York. He served on the Union side in the War between the States. He contributed many articles to medical and scientific journals and was the author of a *Textbook On Anatomy, Physiology and Hygiene,* 1866, *A Practical Laboratory Course In Medical Chemistry,* 1882,

[23] Kelly and Burrage: Dictionary of American Medical Biography, p. 226. Walsh: History of Medicine in New York, p. 254.
[24] Kelly and Burrage: Dictionary of American Medical Biography, p. 996. Transactions of the American Gynecological Society, v. 30, 1905.

and a *Textbook of Medical Physics,* 1885. Henry (1837-1882) deserted the practice of medicine for the chair of physiology in his Alma Mater. A few years later he gave up medicine entirely, devoting himself thereafter to astronomy. His particular interest lay in celestial photography, and his photographs of the moon and spectra of the stars and the nebula of Orion won for him lasting fame. In 1874 he was given a congressional medal, and in 1877 he demonstrated oxygen in the sun. He died of pneumonia contracted while on a scientific expedition in the Rocky Mountains.[25]

Most eminent of New York physicians born in Virginia was Thomas Addis Emmet (1828-1919). He was born May 29, 1828 at the University of Virginia, where his father, John Patten Emmet, long filled the chair of natural history, chemistry, and materia medica. He was a student in the University of Virginia but accomplished very little. Leaving soon for Philadelphia, he entered Jefferson College, and his first lecture there under John Kearsley Mitchell awakened his interest in medicine. He was graduated in 1850 and after three years' invaluable experience on Ward's Island became associated in 1855 with Marion Sims. After this the two are inseparably linked. In Emmet's own words: "During our joint service at the Woman's Hospital my relation with Dr. Sims was as close as that of a son." While Sims was busy here and there, often in Europe, Emmet worked and wrote and enlarged his reputation, so that when Sims resigned in 1861 he succeeded to his service. Like Sims, his primary interest was in vesicovaginal fistula. The greatest work that had ever appeared on this subject was published by him in 1868, summarizing an experience of six hundred cases. Like his chief he was the inventor of numerous surgical instruments. The distinction gained by him along other lines was equally remarkable. He early found recreation in the collection of Americana, and his collection eventually became the greatest in private hands in this country. Including books, manuscripts, and prints it was ultimately purchased by the New York Public Library for $150,000 and is now one of its prized treasures. As a writer on historical subjects he likewise made a name for himself. *Irish Emigration during the Seventeenth and Eighteenth Centuries, The Emmet Family, The Memoirs of Thomas Addis Emmet and Robert Emmet,* and *Incidents of My Life,* are all full of interest and valuable historical material. As an old man he sold his house on Madison Avenue. On the top floor of the skyscraper which was erected there he reserved a suite for himself for the duration of his life. At this height he lived the life of a recluse, interested only in literary pursuits, until his

[25] Kelly and Burrage: American Medical Biographies, pp. 330-332.

death at ninety-one. "Though a later day has changed about all that Sims and Emmet held sacred in surgery . . . yet in the history of gynecology, they abide serene like Castor and Pollux in the starry firmament of the midnight sky."[26]

IV. VIRGINIA PHYSICIANS IN MARYLAND

Considering the proximity of Maryland to Virginia and the exchange of population that constantly went on across the Potomac, it is not surprising to find among Maryland physicians many who were born in Virginia. Outstanding among them was Ashton Alexander (1772-1855). He was born in Alexandria County, near Arlington. The town of Alexandria was named after his ancestors. His father was a captain of cavalry during the Revolution. The son's medical training began under Dr. Philip Thomas of Frederick, Maryland and was completed at the University of Pennsylvania. After his graduation he settled first in North Carolina, but later moved to Baltimore, where he became a charter member and first secretary of the Medical and Chirurgical Faculty of Maryland. He was commissioner of health for Baltimore, consulting physician at the Baltimore Hospital, and provost of the University of Maryland. He was twice married. Upon his death in 1855 he was described as a grand old man with a magnificent physique, fond of dinners and society, who "wore knee and shoe buckles and stockings and carried a gold headed cane."[27]

Thomas Almond Ashby (1848-1916) was born near Front Royal, Virginia, November 18, 1848, the son of Thomas Newton and Elizabeth Almond Ashby. He was a student at Washington College under General Robert E. Lee and graduated in medicine from the University of Maryland in 1873. A cofounder of the *Maryland Medical Journal* and prominent in the organization of the Woman's Medical College of Baltimore, he became in 1897 professor of diseases of women at the University of Maryland. He was president of the Medical and Chirurgical Faculty of Maryland in 1890. His published works consist of a *Textbook of Gynecology, The Valley Campaign,* and *The Life of Turner Ashby.* He died June 26, 1916.[28]

William David Booker (1844-1921) was born in Prince Edward County, Virginia, November 11, 1844. His father was James Madison Booker. Graduating from Hampden-Sidney College in 1862, he enlisted immediately as a

[26] Kelly and Burrage: Dictionary of American Medical Biography, p. 383. Walsh: History of Medicine in New York, v. 2, p. 348.
[27] Cordell: Historical Sketch of the University of Maryland, School of Medicine, p. 116. Cordell: The Medical Annals of Maryland, p. 299.
[28] Kelly and Burrage: Dictionary of American Medical Biography, p. 39.

private in the Third Virginia Cavalry. After the war he took the medical course at the University of Virginia and after graduating in 1867 settled in Baltimore and identified himself with the practice and teaching of pediatrics. From 1897 to 1909 he was professor of clinical pediatrics in the Johns Hopkins Medical School. His attention was directed chiefly toward the clinical and bacteriological study of the summer diarrhœas of infants, and he was a founder and president of the American Pediatrics Society. He died March 15, 1921.[29]

James Cocke (1780-1813) was born in Virginia about 1780. He was a pupil of Sir Astley Cooper's at Guy's Hospital, London, 1801-1802, but returned to this country to graduate from the University of Pennsylvania in 1804. After this he came to Baltimore to associate himself with Dr. John B. Davidge. In 1807 he began to lecture on physiology and at the same time was one of the founders of the College of Medicine of Maryland. Later he became professor of anatomy in the College, occupying the same chair when the institution was converted into the University of Maryland. He died on October 25, 1813. His graduation thesis attracted considerable attention. In it, for the first time in America, ovariotomy was theoretically advocated.[30]

Joshua I. Cohen (1801-1870), one of the earliest otologists, perhaps the first in this country, was born in Richmond, Virginia, in 1801. First a student of Dr. Nathaniel Potter, he graduated from the University of Maryland in 1823 and soon devoted himself to the study of ear diseases. His wide interest in general science is shown by the fact that he was also at one time professor of mineralogy in the University of Maryland. A founder of an eye and ear institute in Baltimore, as well as its otologist, he was a devoted member of the Medical and Chirurgical Faculty, of which he was president in 1857. He died in Baltimore in 1870.[31]

Richard McSherry (1817-1885) was born at Martinsburg, Virginia, November 21, 1817. He was the son of Dr. Richard McSherry. His academic education was obtained at Georgetown College and his medical education at the Universities of Maryland and Pennsylvania. From the latter he graduated in 1841. He began his professional life in the medical corps of the army, serving in Florida under General Taylor and in the Mexican War under General Scott, with an interval as assistant surgeon in the navy under Dr. E. K. Kane. He became a master of the Spanish language and wrote a book entitled *El Puchero*

[29] Kelly and Burrage: Dictionary of American Medical Biography, p. 123.
[30] Curiously enough, another Virginian, Jessee Bennett, did the practical thing of performing the first successful ovariotomy (1794), and still another, Ephraim McDowell, established an international reputation for the same operation.
[31] Kelly and Burrage: Dictionary of American Medical Biography, p. 244.

or a Mixed Dish from Mexico in 1850. After giving up his commission in 1851 he settled in Baltimore and was made professor of materia medica in the University of Maryland in 1863 and of practice of medicine in 1864. Among his published works are *Essays and Lectures on Various Occasions,* 1869, and *Health and How to Promote It,* 1879. He became president of the Medical and Chirurgical Faculty in 1883 and president of the Maryland State Board of Health in 1884. He died of pulmonary tuberculosis, October 7, 1885.[82]

George Junkin Preston (1858-1908), a native of Lexington, Virginia, and a neurologist of Baltimore, was born in 1858, the son of Colonel J. T. L. Preston. His academic education was received at Washington and Lee, his medical education at the University of Pennsylvania, with further study of his specialty, neurology, in Paris under Charcot and later in Leipzig. His teaching career, begun as professor of physiology in the Woman's Medical College, Baltimore, in 1889, was continued as professor of physiology and neurology in the College of Physicians and Surgeons. He was neurologist to several Baltimore hospitals, working hard to improve the condition of the insane. His published works included a work on *Hysteria and Certain Allied Conditions,* 1897, as well as a number of articles. He is said to have initiated the idea of a state bacteriological department. He died June 17, 1908.[83]

Robert Lee Randolph (1860-1919) was born in Fredericksburg, Virginia, December 1, 1860. His father was Bishop of Virginia. Randolph was sent to the Episcopal High School for his preliminary education and to college at Johns Hopkins. He studied medicine at the University of Maryland. As assistant in ophthalmology at the Royal Polyclinic at Vienna, 1886, he laid the foundation for a lifetime of devotion to diseases of the eye. He returned to Baltimore to become surgeon to the Presbyterian Eye and Ear Hospital and to occupy a place on the staff of the Johns Hopkins Hospital. He will be remembered for experimental studies which won him the Alvarenga Prize offered by the College of Physicians of Philadelphia (1899) and the Boylston Prize of the Harvard Medical School (1902). He was one of the editors of the *Annals of Ophthalmology* and of *Progressive Medicine* and wrote a chapter for Norris and Oliver's *Diseases of the Eye.* He died December 9, 1919.[84]

V. VIRGINIA PHYSICIANS IN WASHINGTON

William Beverly Drinkard (1842-1877) was born at Williamsburg, Virginia and lived there until 1857, when his father moved to Washington. He

[82] Kelly and Burrage: Dictionary of American Medical Biography, p. 799.
[83] Kelly and Burrage: Dictionary of American Medical Biography, p. 990.
[84] Kelly and Burrage: Dictionary of American Medical Biography, p. 1010.

entered Mr. Charles Young's school there and later became a student at Georgetown medical college. Without graduating he went to France in 1860 to study at the Lycée Imperiale, Orleans, and later to Paris, where he was assistant in Desmarres's ophthalmological clinic and interne in several hospitals. He received his M. R. C. S. in London in 1865. Returning the same year to Washington he took his M. D. degree at Columbian College and at once entered upon the practice of ophthalmology, devoting part of his time to teaching in the Columbian medical school. He was one of the founders of the Children's Hospital, having charge of the eye and ear department. He died, still a young man, February 13, 1877.[85]

Henry Davidson Fry (1853-1919), a descendant of Colonel Joshua Fry of Revolutionary fame and the son of Hugh Walker Fry, Jr., was born in Richmond, Virginia, April 11, 1853. He received his education in the schools of Richmond and in Columbian University before taking up the study of medicine at the University of Maryland, from which he graduated in 1876. After travel and study in Europe he returned to Washington to confine himself to the practice of obstetrics. He is credited with the first symphyseotomy and the first Cæsarean section in the District of Columbia. He became professor of obstetrics at Georgetown medical school as well as attending gynecologist and obstetrician to the Garfield and other hospitals. He published a *Manual on Maternity* besides contributing many articles to the medical literature of his time. He died May 12, 1919.[86]

Alexander Yelverton Peyton Garnett (1820-1888) was born in Essex County, Virginia, September 19, 1820, was educated by private tutors, and graduated in medicine at the University of Pennsylvania in 1841. He became assistant surgeon in the navy, but in 1848 married Mary E. Wise, daughter of Governor Wise of Virginia, retired from the navy, and settled in Washington. At the outbreak of the Civil War he joined the Confederate army, becoming a prominent surgeon. He was in charge of the Robertson military hospital in Richmond and was physician to President Jefferson Davis, General Robert E. Lee, and most of the families of cabinet officers in Richmond. After the war he returned to Washington, became the first physician of that city, was professor of medicine in Columbian College, and was attached to many of the leading hospitals. He was

[85] History of the Medical Society of the District of Columbia, p. 280. Kelly and Burrage: Dictionary of American Medical Biography, p. 346.
[86] History of the Medical Society of the District of Columbia, p. 310. Kelly and Burrage: Dictionary of American Medical Biography, p. 440.

president of the Medical Society of the District of Columbia, 1882, and of the American Medical Association, 1887. He died July 11, 1888.[37]

Among the organizers of the Medical Society of the District of Columbia in 1817 were William Arnold of Alexandria, Gustavus Alexander Brown (1790-1835), son of Dr. William Brown, who was physician to George Washington, Elisha Cullen Dick of Alexandria, George Clarke of Essex County, Richard Weightman of Alexandria, Samuel Cabell Horsley, and Thomas Henderson. Clarke was a graduate of the University of Pennsylvania in 1810 and died on a professional visit to his home in 1822. Weightman (1792-1841) graduated at the University of Maryland and became assistant surgeon in the United States army. He was captured by the British in 1814. His death was caused by a wound and exposure while on army duty in Florida, October 30, 1841.[38] Horsley was born in Amherst County, Virginia about 1788, was educated at Washington College, and became a surgeon in the United States navy. He escaped with Perry in an open boat when the flagship went down at the battle of Lake Erie. Horsley died on September 8, 1828 at Portsmouth, Virginia.[39] Thomas Henderson, born at Dumfries, Virginia, January 6, 1789, was a graduate in medicine at the University of Pennsylvania and began practice at Warrenton, Virginia. Later moving to Washington he became professor of the theory and practice of medicine in Columbian College in 1824 and was appointed assistant surgeon in the army in 1833. He is said to have been influential in rebuilding Christ Church at Georgetown, building Trinity Church in Washington, and establishing the Theological Seminary at Alexandria. His son-in-law was General Francis H. Smith, Commandant of Virginia Military Institute.[40]

Other Virginians who settled in Washington to practice medicine were, John B. Blake, born at Colchester, 1800; Thomas Miller, born at Port Royal, 1806; James Crowdhill Hall, born at Alexandria, 1805;[41] James B. C. Thornton, born 1809; Floardo Howard, born in Stafford County, 1814; Rufus Holmead Speake, born at Alexandria, 1807; James M. Austin; Martin Van Buren Bogan, born at Woodstock, 1829; McCarthy B. Melvin, born 1814; Raleigh T. Brown; James M. Grymes, born in Norfolk; John Marshall Snyder, born at Charlestown, 1828; William Fontaine Lippitt, born near Leesburg, 1833; Samuel Appleton Storrow; William Proby Young, Jr., born at Portsmouth, 1834; John L. Gib-

[37] History of the Medical Society of the District of Columbia, 1817-1909, p. 244.
[38] History of the Medical Society of the District of Columbia, 1817-1909, p. 219.
[39] History of the Medical Society of the District of Columbia, 1817-1909, p. 216.
[40] History of the Medical Society of the District of Columbia, p. 214.
[41] He died in 1880. He was the "family physician of every President of the United States from Jackson to Lincoln." History of the Medical Society of the District of Columbia, p. 228.

bons, born in Jefferson County between 1790 and 1800; Reuben Cleary, born at Alexandria, 1835; Francis P. Richards; Charles Allen, born at Portsmouth, 1836; William Harrison Triplett, born at Mt. Jackson, 1836; James Otey Harris, born at Alexandria, 1840; Francis Asbury Ashford, born in Fairfax County, 1841; Edwin Walter Latimer, born in Prince William County, 1826; George Arthur Fitch, born at Morgantown, 1846; Charles Evelyn Hagner, born at Norfolk, 1847; James Littleton Suddarth, born in Albemarle County, 1841; Zachariah Turner Sowers, born in Clarke County, 1846; Austin Brockenbrough, born at Chatham, 1846; William Meade Page, born at Millwood, 1831; William Lauck Hudson, born at Luray, 1850; Stephen Olin Richey, born at Woodstock, 1849; Lachlan Tyler, born in Charles City County, 1851; George Wythe Cook, born at Front Royal, 1846; Benjamin George Pool, born in Fairfax County, 1854; William Vincent Marmion, born at Harper's Ferry, 1843; George Byrd Harrison, born at Ampthill, in Cumberland County, 1844; George William West, born in Buckingham County, 1845; William Prince Manning, born 1844; Thomas Marshall Norton, born in Fauquier County, 1863; William Fleet Luckett, born at Middleburg, 1836; Daniel Olin Leech, born at Port Republic, 1862; Thomas Francis Mallan, born at Lynchburg, 1857; Phillip Seddon Roy, born at Tappahannock, 1861; William Mercer Sprigg, born at Petersburg, 1864; Charles Kneller Koones, born at Richmond, 1866; John Duncan McKim, born at Staunton, 1864; William Holland Wilmer, born in Powhatan County, 1863; Robert Maitland Ellyson, born in Petersburg, 1862; Arthur Snowden, born 1862; Edmund Lee Tompkins, born at Richmond, 1862; Charles Read Collins, born at King George, 1862; Daniel Kerfoot Shute, born at Alexandria, 1858; Jefferson Davis Bradfield, born in Fauquier County, 1868; Francis Smith Nash, born 1854; Charles Milton Buchanan, born at Alexandria, 1868; John Edmund Toner, born in Loudoun County 1859; Cornelius Breckenridge Boyle, born at Gordonsville, 1864; Larkin White Glazebrook, born at Richmond, 1867; Rozier Middleton, born at Herndon, 1861; Aurelius Rives Shands, born in Prince George County, 1860; John Thomas Cole, 1856; Taliaferro Clark, born 1867; Robert W. Baker, born 1863; Charles Wright Filler, born at Lovettsville, 1852; James Ramsay Nevitt, born at Naylor's Hold, 1867; Randolph Bryan Carmichael, born at Fredericksburg, 1869; Thomas Beauregard Crittenden, born at Shackelfords, 1862; Edwin Gladmon, born 1859; Virgil B. Jackson, born at Front Royal, 1868; John Daniel Thomas, born in Northampton County, 1868; Robert French Mason, born at Charlottesville, 1869; James Richard Tubman, born at Alexandria, 1867; Linnaeus Samuel

Savage, born at Whaleyville, 1871; Abraham Barnes Hooe, born 1871; Monte Griffith, born in Jefferson County, 1862; Michael D'Arcy Magee, born at Norfolk, 1871; James Bailey Mullins, born in Princess Anne County, 1867; Bernard Lawriston Hardin, born at Lexington, 1870; and William E. Whitson, born 1874.[43]

VI. VIRGINIA PHYSICIANS IN TENNESSEE, NORTH CAROLINA, AND NEW ORLEANS

William Harvey Deaderick (1773-1858) was born in Winchester, November 10, 1773. Early in life he moved to Tennessee and obtained recognition as an original and accomplished surgeon. His claim to fame lies in the fact that he was the first to remove the inferior maxilla. This operation he performed February 6, 1810 on a boy suffering from a large tumor of the bone which had dangerously encroached upon the cavity of his mouth. Sawing through the bone close to the joint and again in the midline, Deaderick removed the whole left mandible.[43]

Richard Dillard (1822-1887) was born in Sussex County on December 1, 1822, graduated from the academic department of the University of Virginia, and took his degree in medicine in 1839 from the University of Pennsylvania. Settling in Edenton, North Carolina, he was long a conspicuous figure in the profession of that state. He was brigade surgeon to General R. A. Payne during the Civil War and at one time was a member of the state senate. He died November 22, 1887.[44]

Bennett Dowler (1797-1879) devoted himself chiefly to the study of physiology. Working with alligators in 1845, he investigated the functions of the cord by sections at various levels. Human post-mortem studies of body heat, muscle contractility, and capillary circulation also interested him. He was a voluminous writer upon these subjects, as well as coeditor of the *New Orleans Medical and Surgical Journal* and the *New Orleans Medical Record*. He was born in Elizabeth, Ohio County, April 16, 1797, and after studying in Virginia and Pennsylvania entered the University of Maryland, where he graduated in 1827. Following a period of practice at Clarksburg, Virginia, he moved to New Orleans. Here he continued to experiment and write until his death in 1879.[45]

[43] History of the Medical Society of the District of Columbia, pp. 224-369.
[43] Kelly and Burrage: Dictionary of American Medical Biography, p. 310. North American Medico-Chirurgical Review, 1858, v. 2, p. 205.
[44] Kelly and Burrage: Dictionary of American Medical Biography, p. 328.
[45] Kelly and Burrage: Dictionary of American Medical Biography, p. 342.

APPENDIX I

Medical Fees

Bills for medical service rendered by Drs. Samuel V. Watkins, D. Flournoy and R. E. Farrar of Prince Edward County.

1820.	Feby 14th—To visit to negro woman Sabina with swelled jaw at Mrs. Jacksons	2.50
1822.	Oct. 17th—To 3 visits and attendance on Sabina a negro woman past 3 nights & days in billious fever	12.00
	4 dovers powders	1.00
	2 ant. Powders & 1 Large _____	1.50
	To one large viol_____oil	1.00
1824.	Sept. 8th—To visit negro Matilda (puerperal Infant 8 days old)——— pil anod ii _____pil th C & J dos j — prescription severe pain of hip	$4.50
	11 — Visit—injured by Acoucheur J. & C. Salts & Cantharides for a very large blister. pil Ipc & Opii iii prescription nightly 2 hours attendance, tho' in great haste	5.00
	14 — Visit—Elle est morte hier au soir	2.50
1827.	Feby 3rd—To a visit and attendance on negro woman Mille	$10.00
1819.	January 20th—To bleeding negro Tom & advice	1.50
	1 dos Jallap & Calomel	.50
	June 13th—1 visit to negro boy Scott	2.00
	To 3 dos medicine & attendance on negro child	3.50
1819.	July 12th—bleeding & attendance on Judah	2.50
1823.	March 23d—To visit to negro children—Aggy & Maria, pulv. Cal. & Ipc. chart. iv Senna i camph. prescription	$2.50
	25th—To 2 calls going & returning from Gen'l Purnall's	
	" Cal. & Spigelia several doses	2.75
	27 " —Visit. cal. & pulv. Dov.	2.00
	29 " —Visit cal. & Rhu. dos iv. Cal. ii dos. for Maria	3.00
	31 " —Call, Emetic, Ipc & Tartar. Cal. & Fol. Senna	2.00
April	16 " —Visit Boy George Emetic T. & Ipc. Cal & Ipc. i.	2.50
	19 " —Visit Emetic i. Cal. &c. iii prescription	2.50
	22 " —Two calls & two Emetics. pil. alterat. vi 26 " —Negro Boy George, better	3.00
	28 " —Visit to George &c divided with A. Dupuy	1.00
May	4 " —Call & med. for George	1.50
	25 " —Call med. dos vi – cal. pil vi	1.00
June	13 " —Two calls going & returning from Gen'l P's Venusection & med negro Annie T. W.'s E.	3.50
July	8 " —To Cal. &c furnish'd Aggy at shop	".33⅓
Sept.	5 " —To visit negro Aggy T. W's Estate, severely injured by a cow's horn rupturing the . . of the abdomen—directed venusection.	
	6 " —Call'd the looseness of Bowels abated contin'd med	$4.00
	10 " —Call'd Aggy—examination Bowels protruded at the ruptured part, directed salts	1.00
	19th—Call negro George, Cal. pil x. directions	1.00

1824. Feb'y 17th—To Visit George, profuse bleeding at the Nose. Scrofula—Cough—Solution Styptic—directed Ice to Nuch. Rhu & Cal. for Betsey 3.50
18 " —Visit George & Betsey better. Cont'd Med. 2.00
25 " — Visit Do. bleeding from the other Nostril, same medicines repeated 2.00

1823. Sept. 5th—To visit Boy Embert and his sister Sally. They had been very profusely puked by Mrs. P. — particular prescription & etc. $3.50

1824. March 24th—To 3 visits Billy, Hariot, Sam med & attendance
25th & 28 " the last Visit I introduced Seton in Gen'l ... } 10.00
" Purnall's .....
31 " Visit to self & negress — Billy better tho' ill Seton discharged well med & O 3.00
April 3d—To Visits to Aaron yrself & c. M. M. _____for Aaron—prescri
6 & 8 tion for Capt. Dupuy's inspection—Examination—In yr. case the Dyspnea really alarming—the Diarrhoea moderated but the feet and Legs Oedematous 6.50
13th— " Visit to Aaron at Capt. Dupuy's—examination med. &c
" went on to yr. House—Spt. N. &c for self 5.00
May 9— " Visit acid Nit ℥ i advised mercur. purg &c 3.00
Sept. 2d & 5th—Visit &c, &c 9.00
Octo. 10, 14, & 15th—Visit &c, &c 6.00
19 " —Visit &c, &c 4.00
Dec. 2d—To Visit &c 3.00

1828. Feby 25th—To visit to see negro child of Sucky with a rising on its neck ———— & dose calomel 2.25

1828. July 11th—To prescription 1½ doz. Pills for negro William with Scrofula 2.00
To 1 large phial Black wash & ½ lb. salts 1.00
1829. February 8th—To visit at Majr. Dupuy Quarter to see negro girl Annie . . . with strangury 2.00
To 1 dose Rhubarb ..... ".25
1829. March 5th—To 2 visits to see negro boy George with Hernia at Sam'l Blankenship's 4.00
To bleeding & 1 dos Jallap ..... ".75
To giving three injections 2.50
To 2 opium Pills & attendance nearly all night with Doct. Farrer (?) 3.50[1]

The medical profession of Richmond adopted a new tariff of fees in 1851. It was agreed to charge one dollar for a visit in the city during the day.[2]

On August 8, 1853 the physicians of Powhatan County adopted the following tariff of fees:

Medical:

Visit at home, or in a village $1
Visit any farther, and under 6 miles $2
Visit after 10 o'clock at night, at home or in a village ..... $2 to $4

[1] From MS. kindly furnished the author by President J. D. Eggleston, of Hampden-Sidney College.
[2] The Stethoscope and Virginia Medical Gazette, 1851, v. 1, pp. 177-180.

Surgical:

For venesection, or extracting tooth	$1
For cupping or leeching	$1
Operations for strangulated hernia	$25 to $100
Operations for cataract	$20 to $100
Operations for stone in the bladder	$50 to $100
Treating strictures of urethra	$50 to $100
Tapping bladder	$20 to $50

Obstetrical:

Delivery, exclusive of visit and attendance	$20[3]

On February 1, 1864, the physicians of Rockbridge County "resolved, that we will practise at *old* prices for those persons who will pay our bills within six months from first date on said bills with *produce* and *other* articles that we may need, at old prices.

"Resolved, that those persons who pay us in currency, produce or manufactures at market prices should be charged in proportion to those prices.

"Resolved, that we will use a wise discretion in making charges against those persons whose circumstances have suffered by the war or have benefitted, and the families and persons of poor Volunteers in the Army, or poor persons at home.

"Resolved, that we will have no professional intercourse with those members of the profession who may refuse or fail to concur in the above resolution."

"Signed by H. M. Estill, S. Watson, S. T. Chandler, C. R. Burks, John N. Freeman, A. S. Mackey, J. McDowell Taylor, J. A. McClurg, J. M. Alexander, George Ross, H. W. Chaplain, D. G. Houston, J. Levi Leitch, Samuel Hileman, John Cooper, Archy Graham, James W. McClurg, W. N. Hardin, Z. J. Walker, William Hamilton, J. M. Steele, D. E. Strain, C. W. Hardin, W. A. Wilkerson."[4]

[3] The Stethoscope, 1854, v. 4, p. 97.
[4] Lexington Gazette, 1864.

APPENDIX II

VIRGINIA SURGEONS IN THE CIVIL WAR

(From a list made up from records in the Record and Pension offices of the War Department in Washington, published in the Richmond Dispatch, February 20, 1898 and succeeding Sundays.)

Adams, Edward T., assistant surgeon, June 1, 1864, 25th Virginia Cavalry.

Adams, John M., assistant surgeon, July 19, 1861, in hospitals in Alabama, Georgia, and Culpeper Court House, Va.

Alexander, Cyrus, surgeon, August 1, 1862, 62d Virginia Infantry; resigned September 4, 1863.

Allen, B. W., assistant surgeon and surgeon, July 15, 1861, in hospitals at Charlottesville, Mt. Jackson and Harrisonburg; promoted to surgeon, May 22, 1862.

Almond, Andrew J., assistant surgeon, June 10, 1863, 8th North Carolina Infantry.

Alsop, George W., assistant surgeon, July 19, 1862.

Amiss, William H., assistant surgeon and surgeon, July 19, 1862, 60th Georgia Infantry, 19th Mississippi Infantry, and in hospital at Richmond; promoted to surgeon September 26, 1862.

Ancrum, John L., assistant surgeon, 34th Battalion, Virginia Cavalry.

Anderson, Philip W., assistant surgeon, February 2, 1864, 23d Virginia Cavalry; resigned February 15, 1865.

Andrews, John S., assistant surgeon, July 19, 1861, in hospital at Charlottesville; resigned February 4, 1862.

Archer, S. W., assistant surgeon, November 13, 1861.

Armstrong, George, assistant surgeon, February 17, 1861, 25th Virginia Infantry, and in hospital at Richmond; retired January 24, 1864.

Ashby, John Washington, assistant surgeon and surgeon, September 26, 1861, 7th Virginia Infantry, 56th Virginia Infantry, and in hospitals at Farmville, Va., Charlotte, N. C., and Raleigh, N. C.; promoted to surgeon, April 2, 1862.

Atkinson, Archibald, assistant surgeon and surgeon, June 21, 1861, "Wise Legion," Va., 31st Virginia Infantry and 10th Virginia Cavalry; promoted to surgeon, September 26, 1862.

Atkinson, Thomas C., surgeon, October 14, 1862, in hospitals at Winchester, Va., and Wilmington, N. C.

Austin, Charles N., assistant surgeon and surgeon, September 13, 1861, 26th Battalion, Virginia Infantry; promoted to surgeon October 14, 1862; resigned October 23, 1863.

Bagnall, J. H., assistant surgeon, October, 1862, 15th Virginia Infantry.

Bagnall, R. D., assistant surgeon October 9, 1861, 3d Georgia Infantry, 20th Georgia Infantry, and in hospitals at Richmond and Mt. Jackson, Va.

Baker, Claiborne H., surgeon, February 17, 1862, 8th Virginia Cavalry.

Baker, Philip P., assistant surgeon and surgeon, October 15, 1861, 6th, 12th and 41st Virginia Infantry; promoted to surgeon March 14, 1863.

Baker, Philip P., surgeon, May 26, 1863, 6th Virginia Infantry.

Baldwin, Cyrus, assistant surgeon, July 1, 1861, 33d Virginia Infantry, and in hospitals at Shepherdstown, Md., and Centreville, Va.

Baldwin, Robert F., surgeon, July 19, 1862, 6th Virginia Infantry, and in hospitals at Staunton, Mt. Jackson, Harrisonburg, Lovingston, Woodstock and Winchester, Va.

Baldwin, Robert S., assistant surgeon and surgeon, July 19, 1862, 16th North Carolina Infantry, 14th Georgia Infantry, and in hospitals at Lynchburg, Richmond and Danville; promoted to surgeon, May 21, 1863; resigned December 19, 1863.

Baldwin, Robert T., assistant surgeon, March 13, 1862, in navy, 21st Virginia Cavalry, 12th Battalion Tennessee Cavalry, and in hospitals at Wilmington, N. C.; resigned July 25, 1863.

Ballou, Isaac T., assistant surgeon, September 23, 1861, 53d Virginia Infantry, dropped August 4, 1862.

Banister, Monro, surgeon, January 5, 1863.

Banks, Richard G., surgeon, June 10, 1861, in hospitals at Richmond and Portsmouth; resigned October 28, 1862.

Barksdale, William Leigh, assistant surgeon and surgeon, October 14, 1862, 23d Battalion Virginia Infantry, 22d Regiment Virginia Infantry, 15th Virginia Cavalry, 19th Virginia Cavalry, and 3d Virginia State Line.

Barnes, W. H., surgeon, 50th Virginia Infantry.

Barnes, William H., assistant surgeon, August 16, 1862, 25th Virginia Infantry.

Barr, W. F., surgeon, 164th Virginia Militia.

Barret, R. L., assistant surgeon, July 19, 1861; resigned October 27, 1861.

Barry, William J., assistant surgeon and surgeon, November 16, 1861, 17th Georgia Infantry, and in hospital at Richmond; promoted to surgeon October 1, 1864.

Bartlett, T. B., assistant surgeon, June 11, 1863, 24th Virginia Cavalry, 42d Battalion Virginia Cavalry, 40th Battalion Virginia Cavalry, and in hospital at Lynchburg.

Barton, Howard T., surgeon, July 19, 1861, in hospitals at Richmond, Va., Fredericksburg, Ashland and Danville.

Bass, David E., assistant surgeon, August 16, 1862, in hospitals at Lynchburg, Culpeper Court House and Gordonsville.

Bauldin, Mahlon, surgeon, 132d Virginia Militia.

Baxter, Oscar F., assistant surgeon and surgeon, 15th Virginia Cavalry, 50th Virginia Infantry, and in hospital at Richmond; promoted to surgeon, June 12, 1863.

Baylor, John C., assistant surgeon, July 1, 1861, "Lynchburg Beauregard Artillery," Va., and in hospital at Richmond.

Baylor, Warner Lewis, assistant surgeon, February 5, 1862, 32nd Battalion, Virginia Infantry, and 44th Battalion, Virginia Infantry, and in hospital at Petersburg.

Bear, Alexander, surgeon, Virginia State Line.

Bee, Isaiah, assistant surgeon and surgeon, December 4, 1862, 31st Virginia Infantry and 17th Virginia Cavalry; promoted to surgeon, February 7, 1863.

Bell, Alexander T., assistant surgeon and surgeon, July 19, 1861, 9th Virginia Infantry, 3d Virginia Cavalry and "Stuart Horse Artillery," Va.

Bell, James E., assistant surgeon, September 14, 1861, 37th Georgia Infantry, and in hospitals at Opelika, Ala., and London, Tenn.; resigned October 27, 1861.

Bell, William, assistant surgeon, August 14, 1862, 7th Battalion Virginia Reserves, and 12th Virginia Cavalry. (Declined appointment.)

Bell, William T., assistant surgeon, November 3, 1864, in hospitals at Richmond and Buchanan, Va., and Cuthbert, Ga.

Benson, D. B., assistant surgeon, November 27, 1862, 53d Virginia Infantry and 15th Virginia Infantry.

Berkeley, T. A., assistant surgeon, July 1, 1861, 5th Virginia Infantry, 61st Virginia Infantry, and in hospital at Staunton, Va.

Berrian, James Hunter, assistant surgeon and surgeon, March 16, 1861, 3d Virginia Cavalry, medical director at Houston, Tex., and inspector of hospitals department, South Carolina, Georgia and Florida; promoted to surgeon, July 16, 1861.

Bickers, William A., assistant surgeon, December 4, 1862, 1st Georgia Infantry and 6th North Carolina Cavalry.

Bilisoly, Virginius B., surgeon, July 19, 1861, 3d Virginia Infantry, 41st Virginia Infantry, medical purveyor at Montgomery, Ala., and in hospital at Selma, Ala.; resigned November 23, 1861; again appointed July 5, 1862.

Black, Harvey, surgeon, July 1, 1861, 4th Virginia Infantry, 5th Virginia Infantry, and in hospital at Winchester, Va.

Blackford, Benjamin, assistant surgeon and surgeon, May 4, 1861, 11th Virginia Infantry, and in hospitals at Front Royal, Va., Kittrell Springs, N. C. and Liberty, Lynchburg, Culpeper Court House and Gordonsville, Va.; promoted to surgeon, May 26, 1862.

Blacknall, George, surgeon, June 14, 1861, in navy; died January 21, 1862.

Blair, M. A., surgeon, August 14, 1863, 20th Virginia Cavalry.

Bland, William J., assistant surgeon and surgeon, July 4, 1861, 31st Virginia Infantry, and in hospital at Charlottesville; promoted to surgeon, November 16, 1861.

Bledsoe, Powhatan, assistant surgeon, August 16, 1862, 32d Virginia Infantry, and in hospitals at Scottsville, Va., and Fort Fisher, N. C.

Board, Charles A., assistant surgeon, April 30, 1862, in hospitals at Liberty and Richmond, Va.

Boatright, John G., assistant surgeon and surgeon, September 13, 1861, in hospitals at Farmville, Danville, Staunton, Richmond, Lynchburg, Culpeper Court House, Va.; Augusta, Madison and Marietta, Ga.; promoted to surgeon, June 12, 1863.

Bolton, James, surgeon, July 10, 1863, in hospitals in Richmond and Lynchburg.

Bondurant, Thomas L., surgeon, October 14, 1862, 25th Battalion Virginia Infantry, and in hospital at Richmond.

Bonner, Lafayette, assistant surgeon, September 2, 1863.

Bonner, S. Lafayette, assistant surgeon, July 21, 1863, 63d Virginia Infantry.

Booth, Edwin G., assistant surgeon, April 1, 1862, in navy on steamer Morgan and steamer Tuscaloosa.

Bowyer, Edmund F., assistant surgeon, July 1, 1861, 2d Virginia Cavalry; resigned November 30, 1861.

Bowyer, James H., assistant surgeon, Virginia State Line.

Boyd, Richard, assistant surgeon and surgeon, July 19, 1861, 64th Georgia Infantry, and in hospitals at Farmville, Orange Court House, Centreville, Culpeper, Gordonsville and Charlottesville, Va.; Charleston and Adams Run, S. C.; promoted to surgeon, November 4, 1864.

Bradley, A. G., assistant surgeon, November 3, 1864, 25th South Carolina Infantry and 20th Alabama Infantry.

Bramblett, William H., assistant surgeon and surgeon, October 14, 1862, 63d Virginia Infantry; promoted to surgeon, 1864.

Branch, J. C., assistant surgeon, September 13, 1861, 44th Battalion Virginia Infantry, and in hospitals at Richmond and Petersburg; resigned March 26, 1864.

Brandt, Logan, assistant surgeon, Staunton Artillery, Va.; died February, 1862.

Braxton, Tomlin, assistant surgeon and surgeon, July 1, 1861, 19th Virginia Infantry, 30th Battalion, Virginia S. S., and in hospital at Richmond; promoted to surgeon, October 3, 1862.

Brevard, E. A., assistant surgeon, July 19, 1861, 5th Virginia Infantry, and in hospital at Lynchburg.

Breysacher, A. L., surgeon, June 14, 1862, medical director, 3d Corps A. M.

Briggs, George W., surgeon, July 19, 1861, 44th Virginia Infantry, 30th North Carolina Infantry, 15th Alabama Infantry, and in hospitals at Gordonsville, Winchester and Richmond.

Brock, C. W. P., assistant surgeon, July 3, 1861, 15th Virginia Infantry, 1st Battalion Virginia Reserves, and in hospital at Richmond.

Brock, Joseph Baldwin, assistant surgeon and surgeon, April 4, 1863, and in hospital at Richmond; promoted to surgeon, June 14, 1864.

Brockenbrough, William S. R., assistant surgeon, July 19, 1862, and in hospitals at Richmond and Warrenton; resigned June 1, 1863.

Bronaugh, F. L., assistant surgeon, February 5, 1862, in hospitals at Charlottesville and Staunton.

Brooks, John V., assistant surgeon, June 1, 1864, in hospitals at Dublin Depot, Va., and Jonesboro, Tenn.

Brown, J. Conway, assistant surgeon, October 16, 1861, 8th Virginia Infantry, and in hospitals at Culpeper Court House and Lynchburg; resigned, October 27, 1862.

Brown, P. F., assistant surgeon, July 15, 1861, 39th Virginia Infantry, and in hospital at Richmond; promoted to surgeon, September 24, 1861.

Browning, John L., surgeon, July 18, 1861, 34th Virginia Militia.

Bryant, George S., surgeon, February 17, 1862, 5th Mississippi Battalion, and in hospital at Talladega, Ala.

Burges, Richard U., assistant surgeon, June 1, 1864.

Burks, N. H., assistant surgeon, Virginia State Line.

Burns, Arthur P., surgeon, June 17, 1861, 7th Virginia Cavalry and in hospital at Winchester; resigned August 11, 1864.

Burton, William H., surgeon, August 14, 1862, 12th Virginia Cavalry, and in hospitals at Leesburg and Staunton, Va.

Burwell, Blair, assistant surgeon and surgeon, September 2, 1861, 8th Virginia Infantry, and in hospital at Richmond; promoted to surgeon, August 2, 1862.

Bush, Robert Hayne, assistant surgeon, December 4, 1862, in hospitals in Richmond, Staunton, Charlottesville, Va., and Plymouth, N. C.

Butler, M. M., assistant surgeon, February 17, 1862, 37th Virginia Infantry.

Butler, William Wilson, assistant surgeon, August 16, 1862.

Butt, Holt F., assistant surgeon and surgeon, June 12, 1861, 3d Virginia Infantry, 32d North Carolina Infantry, and in hospitals at Kettrell Springs, Wilmington and Raleigh, N. C.; promoted to surgeon, August 11, 1862.

Buttermore, Smith, assistant surgeon, February 17, 1862, 31st Virginia Infantry.

Byrne, Albert C., assistant surgeon, December 4, 1862, 4th Virginia Cavalry.

Cabell, John Grattan, surgeon, June 1, 1864, in hospital at Richmond.

Cabell, James L., surgeon, July 3, 1861, in hospitals at Danville and Charlottesville.

Campbell, E. M., surgeon, July 19, 1861, 1st Virginia Cavalry and 37th Virginia Infantry; resigned May 14, 1862.

Campbell, J. L., surgeon, September 23, 1861, 33d Virginia Infantry, 10th Virginia Infantry and 7th Virginia Infantry.

Carmichael, George F., surgeon, October 14, 1862, in hospital at Danville.

Carmichael, S. W., assistant surgeon and surgeon, July 3, 1861, 3d Virginia Artillery, and in hospitals at Lynchburg, Danville, Richmond and Chaffin's Bluff; promoted to surgeon, April 26, 1862.

Carrington, George C., surgeon, February 17, 1862, Virginia Cavalry; resigned July 28, 1862.

Carrington, George W., assistant surgeon and surgeon, July 19, 1861, 2d North Carolina Infantry, and in hospitals at Richmond and Gordonsville; promoted to surgeon, December 5, 1864.

Carrington, William A., assistant surgeon and surgeon, July 1, 1861, 7th Virginia Infantry, 23d Virginia Infantry, and medical director, Richmond, Va., inspector of hospitals, and in hospital at Richmond, Va.

Carrington, William F., assistant surgeon and surgeon, March 26, 1861, in navy, on steamer Baltic, in hospital at Raleigh, N. C., inspector of hospitals, Pensacola and Mobile, and medical director Army of Northern Virginia.

Carter, Charles Shirley, assistant surgeon and surgeon, September 26, 1861, 1st Engineer Troops, Virginia, and in hospitals at Richmond and Fredericksburg, Va.; promoted to surgeon, July 20, 1864.

Carter, George A., assistant surgeon, April 17, 1862, 4th Virginia Artillery, 23d Georgia Infantry, and in hospitals at Richmond and Yellow Sulphur Springs, Va.; resigned October 31, 1862.

Carter, Robert K., assistant surgeon, September 2, 1861, 13th Virginia Infantry, 17th Virginia Cavalry, 14th Georgia Infantry, 7th Georgia Infantry, and in hospitals at Farmville, Staunton, Harrisonburg, Manassas, Va., and Smithville, N. C.

Carter, William G., assistant surgeon and surgeon, November 18, 1862, 57th Virginia Infantry and 53d Virginia Infantry; promoted to surgeon June 1, 1864.

Chaffers, Edward, assistant surgeon, February 2, 1864, in hospital at Petersburg, Va.

Chalmers, Henry C., assistant surgeon July 19, 1861, in hospitals at Lynchburg, Manassas, Va.; resigned November 8, 1864.

Chamblin, John W., assistant surgeon, July 11, 1863, 11th Virginia Cavalry.

Chancellor, Charles W., surgeon, July 1, 1861, 19th Virginia Infantry, and in hospitals at Charlottesville, Centreville and Manassas, Va.

Chancellor, J. E., assistant surgeon and surgeon, September 2, 1861, 52d Virginia Infantry, and in hospitals at Charlottesville and Manassas Junction, Va.

Chandler, Samuel T., assistant surgeon, August 16, 1862, in hospitals at Farmville, Lynchburg and Culpeper Court House, Va.

Chapman, W. D., assistant surgeon, November 13, 1861, in hospitals at Richmond, Gordonsville, Winchester, Warrenton, Staunton and Lynchburg, Va.

Cherry, Isaiah J., assistant surgeon, July 11, 1863, in hospital at Richmond, Va.

Christian, H. B., assistant surgeon, September 13, 1861, 1st Foreign Battalion, and in hospitals at Richmond, Lynchburg and Warrenton, Va.

Christian, M. P., assistant surgeon and passed assistant surgeon, July 18, 1861, in navy, and in hospitals at Richmond and Culpeper Court House, Va.; passed assistant surgeon October 25, 1862.

Christian, Richard A., assistant surgeon, February 2, 1864, 44th Georgia Infantry.

Christian, Samuel B., surgeon, November 16, 1861, in hospital at Lynchburg, Va.; resigned September 24, 1862.

Claggett, Joseph E., surgeon, December 4 ,1862, in hospitals at Richmond, Orange Court House, Warrenton, Hanover Junction and Guinea Station, Va.

Claiborne, John Herbert, assistant surgeon and surgeon, April 19, 1861, 4th Battalion Virginia Infantry, 12th Virginia Infantry, and in hospitals at Richmond and Petersburg, Va.; promoted to surgeon July 1, 1861.

Claiborne, James W., assistant surgeon and surgeon, September 14, 1861, 12th Virginia Infantry; promoted to surgeon April 17, 1862.

Clarke, Fugate, assistant surgeon, June 2, 1863, 34th Battalion Virginia Cavalry.

Clarke, Hobson, assistant surgeon, September 21, 1861, 45th Virginia Infantry, and in 51st Virginia Infantry.

Clendenin, A. F., surgeon, June 21, 1861 (not known).

Clendenin, Alexander, assistant surgeon and surgeon (not found), 5th Virginia Cavalry, 1st Cavalry, "Wise Legion," 3d Virginia State Line, and medical director White Sulphur Springs, Va.; promoted to surgeon November 13, 1862; resigned December 9, 1862.

Clopton, John, assistant surgeon and surgeon, September 13, 1861, 4th Virginia Artillery, 5th Texas Infantry, 16th Georgia Infantry, 13th Mississippi Infantry, and in hospitals at Richmond and Petersburg, Va.; promoted to surgeon, August 25, 1863.

Coakley, J. B., assistant surgeon, November 16, 1861, "Lightfoot's Battalion Artillery," and in hospital at Richmond, Va.

Cochran, Henry K., assistant surgeon, July 16, 1862, in hospital at Richmond, Va.

Cocke, William H., assistant surgeon, November 3, 1864, 14th Virginia Infantry.

Coffin, William H., surgeon, September 13, 1861, in hospitals at Yorktown and Richmond, Va.; cashiered November 6, 1862.

Coleman, Clayton G., Jr., assistant surgeon, November 18, 1862, 24th Virginia Infantry, and in hospitals at Richmond, Winchester, Va., and Goldsboro, N. C.

Coleman, Charles W., assistant surgeon, July 17, 1861, in hospitals at Richmond and Williamsburg, Va.; dropped October 7, 1862; resigned February 14, 1863.

Coleman, John S., assistant surgeon and surgeon, July 16, 1861, 3d Virginia Cavalry, and in hospitals at Augusta and Calhoun, Ga.; promoted to surgeon February 17, 1862; resigned November 14, 1862.

Coleman, Robert T., surgeon, July 16, 1861, 21st Virginia Infantry, and in hospitals at Richmond, Va., Wilmington, N. C., and La Grange, Ga.

Coles, Walter, surgeon, September 13, 1861, 59th Virginia Infantry, in hospital at Mt. Jackson, Va.; medical director, "Wise Legion," and president of executive board, Twelfth Congressional District, Va.

Conrad, Daniel B., surgeon, June 6, 1861, in navy, 2d Virginia Infantry, and at Drewry's Bluff, Va.

Cook, A. T. M., surgeon, July 19, 1861 (not known).

Cooper, George F., surgeon, November 9, 1861, 4th Battalion Georgia Infantry, 60th Georgia Infantry, and in hospital at Macon, Ga.; resigned December 24, 1864.

Corbin, N. M., assistant surgeon, June 15, 1864, 1st Virginia Reserves, and in hospital at Richmond, Va.

Cornick, James, surgeon, September 13, 1861, in navy.

Cowherd, Colby, assistant surgeon, September 13, 1861, 13th Virginia Infantry, 12th Georgia Infantry, 21st Georgia Infantry, and in hospital at Manassas Junction, Va.

Cox, Richard H., surgeon, July 1, 1861, 26th Virginia Infantry; resigned August 21, 1862.

Cracraft, George A., surgeon, August 26, 1863, 36th Battalion, Virginia Cavalry, and 19th Virginia Cavalry.

Crawford, John D., assistant surgeon, July 11, 1863, 17th Virginia Cavalry, and "Botetourt Artillery," Virginia; dropped January 31, 1865.

Crawford, James J., assistant surgeon, September 2, 1863, 13th Virginia Infantry and 58th Virginia Infantry.

Creigh, Thomas, surgeon, October 16, 1861, in hospitals at Pearisburg, Dublin Depot and Lewisburg, Va.

Crenshaw Octavius A., surgeon, July 1, 1861, 16th Virginia Infantry, and in hospitals at Richmond, White Sulphur Springs, Va., and medical director, Army of Kanawha.

Crews, E. M., assistant surgeon, September 21, 1861, "Dixie Artillery," Va.; 11th Alabama Infantry, and in hospitals at Richmond, Warrenton, Manassas Junction, Va., and Guyton, Ga.

Crockett, Charles J., assistant surgeon, November 13, 1862, 27th Battalion, Virginia Cavalry.

Crockett, Joseph, assistant surgeon, October 8, 1861, 4th Virginia Infantry.

Crockett, R., surgeon (not found), Home Guards, Wythe County, Va.

Cropp, James Thomas, assistant surgeon and surgeon, December 6, 1862, 51st Virginia Infantry; promoted to surgeon November 28, 1864.

Cropp, P. L., assistant surgeon (not found), 51st Virginia Infantry.

Croxton, William V., assistant surgeon, January 28, 1865, in hospitals at Raleigh and Salisbury, N. C.

Cullen, J. S. D., surgeon, July 1, 1861, 1st Virginia Infantry, and in hospital at Manassas, Va.

Cumming, Hartford M., assistant surgeon, November 19, 1861, 1st Battalion, Virginia Cavalry, and 63d Georgia Infantry.

Cunningham, Francis D., surgeon, July 19, 1861, 30th Virginia Infantry, and in hospitals at Richmond, Va., and Little Rock, Ark., and medical director District of Arkansas, and Transmississippi Department.

Cunningham, William D., assistant surgeon, August 14, 1863, 20th Virginia Cavalry, and in hospitals at Richmond and Lynchburg, Va.

Curd, Isaac, assistant surgeon, November 13, 1861, in hospital at Lewisburg, Va.; resigned January 24, 1862.

Curtis, Bartlett A., assistant surgeon, July 19, 1861, 59th Virginia Infantry, and in hospital at Richmond, Va.

Dailey, Robert W., surgeon, July 19, 1861, 23d Virginia Infantry, and in hospital at Lexington, Va.

Dance, P. S., assistant surgeon, November 13, 1861, in hospitals at Huguenot Springs and Danville, Va.; resigned April 7, 1864.

Darden, H. K., assistant surgeon, August 27, 1863, "Phillips Legion," Georgia, and "Jeff Davis Legion," Mississippi.

Daugherty, William H., assistant surgeon and surgeon, July 19, 1862, 14th Virginia Infantry; promoted to surgeon January 25, 1863.

Davidson, H. G., surgeon, July 1, 1861, 3d Virginia Infantry, 5th Virginia Infantry, and in hospitals at Danville and Richmond, Va., and Corinth, Miss.

Davidson, William J., assistant surgeon, September 13, 1861, in hospitals at Richmond, Harrisonburg, Va., and Augusta, Ga.

Davies, William B., assistant surgeon and surgeon, November 13, 1861, 2d Virginia Cavalry; promoted to surgeon February 5, 1862; killed February 27, 1863.

Davis, John S., surgeon, July 3, 1861, in hospital at Charlottesville, Va.

Davis, James W., assistant surgeon, November 3, 1864, 46th Virginia Infantry, 30th Virginia Infantry, and in hospitals at Richmond and Gordonsville, Va.

Day, William Benjamin, surgeon, February 2, 1864, in hospital at Richmond, Va.; Dalton and La Grange, Ga.; resigned January 1, 1864.

Day, William C., assistant surgeon, November 3, 1864, in hospital at Abingdon, Va.

De Bree, John, assistant surgeon, July 18, 1862, in navy, and in hospitals at Richmond, Va., and St. Marks, Fla.

Dennis, Jacob M., assistant surgeon and surgeon, September 11, 1861, 23d Virginia Infantry, and in hospital at Mt. Jackson, Va.; promoted to surgeon February 27, 1863.

Dennis, Thomas C., assistant surgeon, June 16, 1864, 1st Virginia Reserves, and in hospitals at Richmond and Petersburg, Va.

Deyerle, John S., assistant surgeon and surgeon, June 1, 1864, 21st Virginia Cavalry.

Dickinson, Samuel T., assistant surgeon, November 13, 1861, 12th Virginia Infantry, 46th Virginia Infantry, and in hospitals at Richmond, Warrenton and Winchester, Va.; resigned November 1, 1864.

Diggs, Charles H., assistant surgeon, November 18, 1862, 61st Virginia Militia.

Doak, Abner V., assistant surgeon and surgeon, June 11, 1863, 32d Battalion, Virginia Cavalry; 42d Battalion, Virginia Cavalry; 24th Virginia Cavalry, and in hospital at Danville, Va.; promoted to surgeon September 14, 1864.

Dold, Samuel M., assistant surgeon, July 13, 1863, in hospitals at Richmond and Lexington, Va., and Wilmington, N. C.

Donges, G. H., surgeon, September 2, 1861, 58th Virginia Militia.

Douglass, W. W., assistant surgeon and surgeon, April 17, 1862, 10th Virginia Cavalry, and in hospital at Staunton, Va.; promoted to surgeon June 1, 1864.

Dove, James, surgeon, October 2, 1861, in hospitals at Richmond, Salem, Wytheville, Montgomery Springs and White Sulphur Springs, Va.

Drew, Edward C., assistant surgeon and surgeon, July 1, 1861, 26th Virginia Infantry, Richmond Howitzers, and in hospital at Richmond, Va.; promoted to surgeon October 11, 1861.

Drewry, Emmett A., assistant surgeon, February 2, 1864, in hospitals at Salisbury and Raleigh, N. C., and Petersburg, Va.

Dulaney, William Hamilton, assistant surgeon and surgeon, June 1, 1864, 13th Battalion Virginia Artillery, and in hospitals at Staunton and Lynchburg, Va.; promoted to surgeon April 11, 1864.

Dunbar, William A., assistant surgeon (not found), Virginia State Line.

Dunkley, Charles Lee, assistant surgeon, December 4, 1862, in hospitals at Richmond and Staunton, Va.

Dunn, James, surgeon, July 1, 1861, 3d Virginia Infantry, and in hospital at Smithfield, Va.

Dunn, James H., surgeon, June 9, 1862, 63d Virginia Infantry; resigned September 5, 1862.

Dupuy, John J., assistant surgeon, June 10, 1863, 15th Georgia Infantry, and in hospital at Huguenot Springs, Va.

Durrett, A. L., assistant surgeon, September 13, 1861, 35th Georgia Infantry; resigned November 24, 1862.

Eagin, Charles W., assistant surgeon (not found), 19th Virginia Cavalry.

Early, Orville R., assistant surgeon and surgeon, July 19, 1861, 12th Batallion Virginia Artillery, and in hospitals at Lynchburg and Camp Lee, Va.; promoted to surgeon October 14, 1862.

Earout, William L., assistant surgeon, June 15, 1863, 1st Virginia Artillery.

Easley, William S., assistant surgeon, July 19, 1862, in hospitals at Yorktown, Va., and Florence, S. C.; resigned December 30, 1862; again appointed January 28, 1865.

Edmonds, N. C., assistant surgeon, August 5, 1862, in navy, and in hospitals at Drewry's Bluff, Va., and on steamer Morgan.

Edwards, Richard H., surgeon, July 10, 1861, 57th Virginia Militia, 8th Virginia Infantry, and in hospitals at Farmville, Leesburg, Manassas Junction, Montgomery Springs, Va., and Columbia, S. C.

Eliason, Talcott, assistant surgeon and surgeon, September 2, 1861, 1st Virginia Cavalry, and in hospitals at Richmond and Manassas, Va.; promoted to surgeon March 4, 1862; resigned July 15, 1864.

Ellett, Robert T., assistant surgeon, June 10, 1863, in hospitals at Wytheville and Montgomery Springs, Va.

Ellzey, Mason Graham, assistant surgeon, July 19, 1862, 8th Virginia Infantry, and in hospitals at Lynchburg and Richmond, Va.

Eppes, Algernon S., assistant surgeon, June 1, 1864, in hospitals at Huguenot Springs, Va.

Eppes, Benjamin Franklin, surgeon, February 2, 1864 (not known).

Eppes, Ed. Carter, assistant surgeon, April 4, 1863, in hospitals at Richmond and Chaffin's Bluff, Va.

Estes, James D., assistant surgeon, April 30, 1862, 8th Virginia Infantry, 18th Virginia Infantry and 28th Virginia Infantry.

Estill, James M., surgeon, July 19, 1861, 51st Virginia Infantry, and in hospital at Dublin, Va.

Eves, Abram E., assistant surgeon, July 13, 1863, in hospitals at Gordonsville, Liberty and Charlottesville, Va.

Fahs, Charles F., surgeon, January 1, 1862, in navy, and at Ordnance Works, Selma, Ala.

Fairfax, Albert, assistant surgeon, April 17, 1862, 30th Battalion Virginia, S. S., 6th South Carolina Infantry; "Holcombe Legion," South Carolina, and in hospitals at Richmond, Lynchburg and Buchanan, Va.

Fairfax, Orlando, assistant surgeon, July 15, 1861, in hospital at Charlottesville, Va.; resigned November 20, 1861.

Fairfax, William H., assistant surgeon, July 24, 1862, 15th Battalion Virginia Cavalry, and 5th Virginia Cavalry.

Farrar, William F., surgeon (not found), 5th Battalion Virginia Infantry, 10th Battalion Virginia Artillery, Ward's Mississippi Battery, and in hospital at Richmond, Va.

Fauntleroy, A. M., assistant surgeon and surgeon, March 16, 1861, in hospitals at Staunton, Danville, Lynchburg, Richmond, Gordonsville, Centreville and Culpeper Court House, Va., and medical director, Wilmington, N. C.; promoted to surgeon June 27, 1861.

Fauntleroy, J. F., surgeon, August 16, 1862, in hospital at Danville, Va.; resigned November 12, 1864.

Ferguson, James E., assistant surgeon and surgeon, November 16, 1861, 18th Virginia Infantry and 29th Virginia Infantry; promoted to surgeon August 23, 1864.

Ferguson, William C., assistant surgeon, August 16, 1862, in hospitals at Richmond, Va., and Charleston, S. C.

Field, Hume, assistant surgeon, August 16, 1862, 15th Virginia Infantry, and in hospitals at Liberty, Farmville and Petersburg, Va.

Field, John A., assistant surgeon, June 10, 1862, 4th Virginia Infantry.

Field, Spotswood George, assistant surgeon, June 1, 1864, in hospital at Richmond, Va.

Fisher, Samuel B., surgeon, July 1, 1861, in hospitals at Richmond, Manassas, Staunton and Warrenton, Va.

Fisher, Thomas H., assistant surgeon and surgeon, September 2, 1861, in hospitals at Richmond, Lynchburg, Manassas, Danville, Gordonsville and Winchester, Va.; promoted to surgeon February 17, 1862.

Fitzpatrick, Alexander B., assistant surgeon, July 19, 1861, 51st Virginia Infantry, and in hospitals at Richmond and Lynchburg, Va.

Fleming, Malcolm N., assistant surgeon and surgeon, February 5, 1862, 21st Virginia Infantry, 20th Virginia Infantry, and in hospital in Richmond, Va.; promoted to surgeon June 12, 1863.

Fletcher, Corbin D., assistant surgeon and surgeon, November 16, 1861, in hospitals at Chaffin's Farm, Newbern and Taylor's Farm, Va.; promoted to surgeon July 19, 1862.

Flinn, V. H., assistant surgeon, September 2, 1861, 10th Virginia Infantry, 97th Virginia Militia, 1st Battalion Virginia Infantry, Regulars, and in hospital at Winchester, Va.; resigned December 5, 1864.

Floyd, William P., surgeon (not found), — — Virginia State Line.

Fontaine, John B., assistant surgeon and surgeon, July 1, 1861, 4th Virginia Cavalry, and medical director Cavalry Corps, Army of Northern Virginia; promoted to surgeon September 26, 1862.

Ford, Marcellus, assistant surgeon, March 11, 1862, in navy, on steamer Chattahoochee, and steamer North Carolina.

Fox, Addison C., assistant surgeon, September 13, 1861, in hospitals at Richmond and White Sulphur Springs, Va.

Franklin, Joel W., assistant surgeon, July 11, 1863, 56th Georgia Infantry, and in hospital at Madison, Ga.

Freeman, Robert J., assistant surgeon, August 20, 1861, in navy, on steamer Atlanta; on steamer Palmetto State, and in hospital at Yazoo City, Miss.; passed assistant surgeon, October 25, 1862.

Fry, Francis T., assistant surgeon and surgeon, July 19, 1861, 16th Virginia Infantry, 16th North Carolina Infantry, and in hospitals at Richmond and Staunton, Va.; promoted to surgeon July 9, 1863.

Fuqua, William M., assistant surgeon and surgeon, September 13, 1861, 3d Virginia Artillery, 7th Florida Infantry, 11th North Carolina Infantry, and in hospitals at Richmond and Danville, Va.; promoted to surgeon January 5, 1863; resigned October 14, 1863.

Gaddis, Thomas, assistant surgeon, February 5, 1862, 2d Mississippi Cavalry, and 4th Mississippi Cavalry.

Gaenslen, J. J., assistant surgeon and surgeon, March 16, 1861, medical director and inspector of hospitals, District of Texas; promoted to surgeon September 2, 1861.

Gaines, John M., assistant surgeon and surgeon, July 17, 1861, 8th Virginia Infantry, 18th Virginia Infantry, and in hospital at Culpeper Court House, Va.; promoted to surgeon November 6, 1862.

Gaines, William G., assistant surgeon (not found), 8th Virginia Infantry.

Galt, Francis L., surgeon, April 15, 1861, in navy.

Galt, G. A. D., assistant surgeon and surgeon, September 13, 1861, in hospitals at Culpeper Court House, Lynchburg, Winchester, Petersburg and Norfolk, Va.; promoted to surgeon June 1, 1864.

Galt, James D., assistant surgeon and surgeon, July 1, 1861, 14th Virginia Infantry, 19th Virginia Infantry, and in hospitals at Camp Starke, Va.; promoted to surgeon June 12, 1862.

Galt, Robert, assistant surgeon, October 18, 1861, 6th Virginia Cavalry.

Galt, William H., surgeon, June 13, 1863, in hospital at Dalton, Ga.

Gamble, Hamilton M., assistant surgeon, April 17, 1862, 25th Virginia Infantry, 23d Virginia Cavalry, 13th Louisiana Infantry, and 4th Kentucky Cavalry.

Gardner, John B., surgeon (not found), 40th Battalion Virginia Cavalry, Wren's 31st Battalion Virginia Cavalry, and in hospital at Farmville, Va.

Garnett, A. S., assistant surgeon and surgeon, June 24, 1861, in navy, on steamer Baltic, and in hospital at Drewry's Bluff, Va.; promoted to surgeon August 22, 1862.

Garnett, Charles L., assistant surgeon and surgeon, June 29, 1861, 54th Virginia Infantry, and in hospitals at Richmond, Petersburg and Charlottesville, Va.; promoted to surgeon June 27, 1864.

Garnett, David S., assistant surgeon, September 4, 1861, in hospital at Richmond, Va.

Garretson, Frederick, assistant surgeon, June 10, 1861, in navy on steamer Florida; passed assistant surgeon, September 13, 1862.

Garrett, Henry I., surgeon, February 17, 1862, 50th Virginia Infantry.

Gaskins, James H., assistant surgeon, September 9, 1861, 50th Virginia Infantry, 14th Alabama Infantry, and in hospitals at Richmond, Petersburg and Danville, Va.

Gibson, Charles B., surgeon, June 11, 1861, surgeon-general, State of Virginia, and in hospital at Richmond, Va.

Gibson, John St. P., assistant surgeon and surgeon, June 10, 1863, 52d Virginia Infantry, and in hospital at Winchester, Va.; promoted to surgeon April 18, 1863.

Gibson, N. G., assistant surgeon (not found), 37th Battalion Virginia Cavalry.

Gildersleeve, John R., assistant surgeon, June 1, 1864, in hospital at Richmond, Va.

Gilkeson, James B., assistant surgeon, July 13 1863, 11th Battalion Georgia Artillery, and in hospitals at Winchester and Staunton, Va.

Gilliam, James S., assistant surgeon and surgeon, October 15, 1861, 9th Virginia Cavalry, and chief surgeon Army of Northern Virginia.

Gilliam, T. F., assistant surgeon, July 11, 1863, Company A, 12th Battalion Virginia Artillery, and in hospital at Petersburg, Va.

Gleaves, Samuel C., surgeon, July 11, 1861, 45th Virginia Infantry, and in hospital at Dublin Depot, Va.; resigned May 30, 1863.

Godwin, Isaac R., assistant surgeon, April 4, 1863, 45th North Carolina Infantry and 2d North Carolina Battalion.

Goodall, Charles P., assistant surgeon, September 26, 1862, 4th Virginia Cavalry; resigned August 29, 1863.

Goode, Reginald H., assistant surgeon, April 4, 1863, 49th North Carolina Infantry.

Goodwin, W. H. B., assistant surgeon, February 2, 1864, 12th Texas Cavalry, and in hospitals at Richmond, Va., and Columbus, Ga.

Goolrick, Peter, assistant surgeon, April 4, 1863, 49th Virginia Infantry, Stark's Battalion Artillery, and in hospital at Staunton, Va.

Gordon, Alexander T., assistant surgeon and surgeon, September 13, 1861, 18th North Carolina Infantry; Pegram's Battalion Artillery, Virginia, and in hospitals at Winchester, and Warrenton, Va.; promoted to surgeon April 9, 1864.

Gordon, Edwin Wade, assistant surgeon, December 4, 1862, in hospital at Richmond, Va.

Gordon, John C., assistant surgeon, June 12, 1861, 38th Virginia Infantry; resigned November 6, 1861.

Graham, John Alexander, assistant surgeon and surgeon, August 16, 1862, 5th Virginia Infantry and 42d Virginia Infantry; promoted to surgeon November 12, 1862.

Grammer, John, Jr., surgeon, February 2, 1864, 26th Battalion Virginia Infantry and 62d Virginia Infantry.

Gravatt, John J., surgeon, May 30, 1863, in hospital at Richmond, Va.

Gray, Henry V., assistant surgeon and surgeon, October 16, 1861, 13th Louisiana Infantry, 21st Mississippi Infantry, Huger's Battalion Virginia Artillery, and in hospital at Richmond, Va.; promoted to surgeon June 1, 1864.

Green, Bennett W., assistant surgeon, May 23, 1861, in navy, and in hospitals at Richmond and Culpeper Court House, Va.; passed assistant surgeon October 25, 1862.

Green, Daniel S., surgeon, June 20, 1861, in navy, and in hospitals at Culpeper Court House and Lynchburg, Va.

Green, James C., assistant surgeon, December 4, 1862, 5th Virginia Cavalry.

Green, William, assistant surgeon and surgeon, 13th Virginia Infantry, and in hospitals at Richmond, Culpeper Court House, Lynchburg, Charlottesville and Petersburg, Va.; promoted to surgeon October 10, 1862.

Greene, James W., assistant surgeon, August 27, 1863, 13th Virginial Cavalry, 44th North Carolina Infantry.

Gregory, John C., assistant surgeon, June 2, 1863, in hospital at Richmond, Va.

Gregory, William T., assistant surgeon, August 16, 1862, 13th Virginia Cavalry, and in hospitals at Richmond and Danville, Va.

Gresham, Charles, assistant surgeon, June 11, 1863, 53d North Carolina Infantry.

Gresham, Henry, surgeon, September 5, 1861, 55th Virginia Infantry; resigned May 20, 1862.

Griffin, Patrick Henry, assistant surgeon and surgeon, August 16, 1862, 18th Mississippi Infantry, and in hospital at Selma, Ala.; promoted to surgeon June 1, 1864.

Grigsby, Alexander S., surgeon, December 4, 1862, 1st Virginia Infantry.

Groves, Joseph A., surgeon, August 25, 1863, 37th Mississippi Infantry, and in hospitals at Barnesville, Ga., Opelika, Ala., and Chattanooga, Tenn.

Grymes, William S., surgeon, July 1, 1861, 13th Virginia Infantry, and medical director 4th Brigade, ——.

Guyer, John S., assistant surgeon and surgeon (not found), 51st Virginia Militia; promoted to surgeon February 17, 1862.

Haircock, W. S., assistant surgeon, May 24, 1864 (not known).

Hairston, William, assistant surgeon (not found), "Texas Rangers," and 1st Cavalry ("Wise Legion"), Virginia.

Hall, Francis S., assistant surgeon, June 1, 1864 (not known).

Hall, J. Edward, assistant surgeon and surgeon, October 15, 1861, in hospitals at Richmond, Va., and Forsyth, Ga.; promoted to surgeon June 12, 1863.

Hall, Lucien, assistant surgeon and surgeon, July 19, 1862, 17th South Carolina Infantry and "Washington Artillery," Louisiana; promoted to surgeon April 30, 1864.

Hambleton, James P., surgeon, October 14, 1861, 4th Georgia Battalion, 35th Georgia Infantry, 56th Georgia Infantry, and in hospital at Atlanta, Ga.; resigned December 19, 1862.

Hammond, George, assistant surgeon, August 25, 1862, 11th Georgia Infantry, 18th Battalion Virginia Artillery, and in hospitals at Raleigh, Wilmington and Wilson, N. C., and Richmond Defences, Va.

Hamner, W. W., assistant surgeon, October 16, 1861, in hospitals at Richmond, Charlottesville and Lynchburg, Va.

Hancock, Francis W., surgeon, September 2, 1861, Latham's Battery, Loudoun Artillery, King William Artillery, Governor's Mounted Guards, Virginia, and in hospitals at Richmond, Centreville and Scottsville, Va.

Hancock, Philip S., assistant surgeon, May 1, 1863, 4th Virginia State Line, 21st Virginia Cavalry, and in hospital at Richmond, Va.

Hancock, W. S., assistant surgeon, November 3, 1864 (not known).

Harcum, Leroy L., assistant surgeon, September 13, 1861, 46th Virginia Infantry, "Wise Legion," Artillery, and Starke's Battalion Artillery.

Harding, Charles E., assistant surgeon, October 11, 1861 (not known).

Hardy, William A., assistant surgeon, April 30, 1862, in hospitals at Richmond, Va., and Shreveport, La.

Harper, Robert M., assistant surgeon, August 16, 1862, in hospitals at Richmond, Liberty and Farmville, Va.; resigned May 15, 1863.

Harrell, Richard A., assistant surgeon, June 11, 1863, 14th Virginia Infantry and 9th Virginia Infantry.

Harris, Alex., assistant surgeon and surgeon, August 16, 1862, 15th Virginia Infantry, and in hospitals at Winchester and Warrenton, Va.; promoted to surgeon October 14, 1862.

Harris, I. R., assistant surgeon (not found), 4th Virginia Reserves, and in hospitals at Richmond, Va.

Harris, Thomas Alex., surgeon, August 16, 1862, 20th Battalion Virginia Artillery and 18th Battalion Virginia Artillery.

Harrison, Burleigh, assistant surgeon and surgeon, September 2, 1861, 26th Virginia Infantry; promoted to surgeon August 24, 1864.

Harrison, B. C., assistant surgeon and surgeon, September 2, 1861, 28th Virginia Infantry and 56th Virginia Infantry; promoted to surgeon November 4, 1864.

Harrison, George T., assistant surgeon and surgeon, October 11, 1861, 24th Virginia Infantry, and in hospitals at Richmond, Va., and Wilmington, N. C.; promoted to surgeon June 12, 1863.

Harrison, J., assistant surgeon, July 19, 1862 (not known).

Harrison, John C., assistant surgeon, November 3, 1864, in hospitals at Richmond and Wytheville, Va.; Raleigh and Wilson, N. C.

Harrison, James F., surgeon, June 18, 1861, in navy, and in hospital at Richmond, Va.

Harrison, Jacob P., assistant surgeon, April 30, 1862, in hospital at Richmond, Va.

Harrison, Virginius W., assistant surgeon and surgeon, October 15, 1861, in Kirkland's Brigade, and in hospitals at Richmond, Harrisonburg and Mt. Jackson, Va.; promoted to surgeon January 5, 1863.

Harrison, William D., surgeon, March 6, 1863, in navy, in James River Squadron.

Harrow, John W., assistant surgeon June 11, 1863, 11th Virginia Infantry, and in hospital at Richmond, Va.

Hay, William, assistant surgeon and surgeon, July 19, 1861, 33d Virginia Infantry, and in hospital at Staunton, Va., promoted to surgeon November 15, 1861.

Hayslett, Andrew J., assistant surgeon, July 11, 1863, McIntosh's Battalion, Virginia Artillery.

Heagy, George W., surgeon, May 30, 1863, 89th Virginia Militia, and in hospital at Winchester, Va.

Heath, Horace M., assistant surgeon, June 1, 1864, Young's Battery, and in hospital at Richmond, Va.

Heath, John F., surgeon, November 7, 1861, Fort Caswell Battalion, North Carolina Infantry; dropped October 7, 1862.

Heflin, W. S., assistant surgeon, September 11, 1861, in hospital at Culpeper Court House, Va.

Henderson, A. J., surgeon, October 1, 1861, 37th Virginia Militia; resigned May 23, 1862.

Henkle, Caspar C., surgeon, September 2, 1861, 97th Virginia Militia and 37th Virginia Infantry.

Henley, Leonard, assistant surgeon and surgeon, July 9, 1861, 32d Virginia Infantry, and in hospitals at Petersburg, Va., and Montgomery, Ala.; resigned as assistant surgeon November 19, 1862; again appointed assistant surgeon November 3, 1864; promoted to surgeon (date not stated).

Henning, William H., assistant surgeon, July 19, 1861, 44th Virginia Infantry.

Hereford, Thomas P., assistant surgeon, July 11, 1863, 14th Virginia Cavalry.

Herndon, Brodie S., surgeon, May 30, 1863, in hospitals at Richmond, Va.; High Point, N. C.; Columbia, S. C., and Andersonville, Ga.

Herndon, James C., assistant surgeon and surgeon, December 24, 1861 (not known); promoted to surgeon February 5, 1862.

Herndon, Z. B., assistant surgeon, July 19, 1861, 5th Texas Infantry, and in hospitals at Richmond, Culpeper Court House, Gordonsville, Fredericksburg, Dumfries and Charlottesville, Va.

Hickman, R. M., assistant surgeon (not found), — Virginia State Line.

Higginbotham, Ed. G., assistant surgeon and surgeon, July 19, 1861, 33d North Carolina Infantry, and in hospital at Richmond, Va.; promoted to surgeon (date not stated).

Hill, William O., assistant surgeon, July 1, 1861, 19th Battalion Virginia Artillery, 20th Battalion, Virginia Artillery, and in hospitals at Richmond, Culpeper Court House and Chaffin's Farm, Va.

Hill, William R., assistant surgeon, September 2, 1861, 35th Georgia Infantry, and in hospital at Richmond, Va.

Hillsman, John A., assistant surgeon, April 26, 1862, 44th Virginia Infantry.

Hines, James W., assistant surgeon and surgeon, November 13, 1861, medical purveyor, Richmond, Va.; promoted to surgeon June 12, 1863.

Hinton, John R., assistant surgeon, April 4, 1863, 1st Virginia Infantry, and in hospital at Danville, Va.

Hoard, Robert L., assistant surgeon, July 19, 1862, 47th Virginia Infantry, 3d Virginia Artillery, and Garnett's Battalion, Virginia Artillery.

Hoff, Oliver, assistant surgeon, June 30, 1862, 56th Virginia Infantry, and in hospital at High Point, N. C.

Hoffman, Robert H., surgeon, July 11, 1861, 50th Virginia Infantry.

Holden, Randolph, assistant surgeon, February 2, 1864 (not known).

Holliday, S. Taylor, assistant surgeon, February 17, 1862, 31st Virginia Militia, and 27th Virginia Infantry.

Holloway, Robert G., assistant surgeon, June 10, 1863, 38th Georgia Infantry, and in hospitals at Richmond and Montgomery Springs, Va.

Hope, Jesse P., assistant surgeon and surgeon, February 5, 1862, 25th Battalion, Virginia Infantry, and in hospitals at Richmond and Chaffin's Farm, Va.; promoted to surgeon March 11, 1863.

Hopkins, H. St. George L., assistant surgeon, November 18, 1862, 3d North Carolina Battalion, in hospitals at Richmond and Mt. Jackson, Va., and medical purveyor, Orange Court House, Va.

Hoskins, William, assistant surgeon and surgeon, October 11, 1861, 26th Virginia Infantry, and 59th Virginia Infantry; promoted to surgeon June 1, 1864.

Houston, M. H., surgeon, July 1, 1861, in hospitals at Lynchburg, Culpeper Court House and Harper's Ferry, Va.

Howard, E. Lloyd, surgeon, November 2, 1861, "Courtney Artillery," Virginia, and in hospital at Manassas, Va.

Howard, Marion, assistant surgeon and surgeon, July 1, 1861, 56th Virginia Infantry, 59th Virginia Infantry, in hospital at Richmond, Va., and medical purveyor, Charlotte, N. C.; promoted to surgeon October 2, 1861.

Howard, Thomas H., assistant surgeon, June 27, 1862, 9th Virginia Infantry, 14th Virginia Infantry, and 30th Virginia Infantry.

Hoyt, B. H., surgeon, October 14, 1862, 45th Virginia Infantry, and in hospital at Red Sulphur Springs, Va.

Hughes, James Fitz, assistant surgeon, June 1, 1864, in hospitals at Richmond and Scottsville, Va., and Macon, Ga.

Hunter, Alex., assistant surgeon and surgeon, April 17, 1862, in hospitals at Forsyth, Ga., and Columbus, Miss.; promoted to surgeon March 9, 1863.

Hunter, Andrew, assistant surgeon, September 11, 1861, 6th Louisiana Infantry, and in hospitals at Forsyth, Ga.; Columbus, Miss., and Orange Court House, Va.

Hunter, C. M., assistant surgeon, July 19, 1861, in hospitals at Richmond, Fredericksburg, Gordonsville and Warrenton, Va.

Hunter, John A., surgeon, July 1, 1861, 27th Virginia Infantry, in hospitals at Fairfax Court House, Montgomery Springs and Martinsburg, Va., and medical director, Army of Northern Virginia, and Army of Southwest Virginia.

Hunton, George W., assistant surgeon, July 18, 1861, 8th Virginia Infantry; resigned October 30, 1861.

Hurt, R. T., assistant surgeon and surgeon, November 3, 1864, 56th Virginia Infantry, and in hospitals at Richmond and Petersburg Va.

I'Anson, Richard W., assistant surgeon, June 10, 1863, 2d North Carolina Cavalry; resigned January 14, 1864.

Ingram, S. L., assistant surgeon, September 2, 1861, "Courtney Artillery," Va.; "Jeff Davis Artillery," Miss., and in hospital at Manassas Junction, Va.; resigned February 27, 1862.

Jackson, A. J., surgeon, September 13, 1861 (not known).

James, Nathaniel R., assistant surgeon, June 13, 1863, 22d Battalion Virginia Infantry, 47th Virginia Infantry, and 40th Virginia Infantry; resigned June 3, 1864.

Jeffrey, Richard W., surgeon, February 8, 1862, in navy, Naval Station, Savannah, Ga.

Jennings, William K., surgeon, June 24, 1861, 115th Virginia Militia, and in hospital at Lynchburg, Va.

Johnson, J. T., assistant surgeon, September 9, 1861 (not known).

Johnson, James T., surgeon, November 16, 1861, in hospitals at Farmville and Manassas, Va., and medical purveyor, Charlotte, N. C.

Johnston, Harvey G., surgeon (not found), 86th Virginia Militia.

Johnston, James A., assistant surgeon, November 3, 1864, in hospital at Lynchburg, Va.

Johnston, W. V., assistant surgeon (not found), 9th Virginia Cavalry; resigned June 12, 1862.

Jolly, M. A., assistant surgeon, September 11, 1861, 11th Alabama Infantry, 43d Alabama Infantry, and "Jeff Davis Legion," Mississippi.

Jones, Alex., surgeon, February 5, 1862, in hospitals at Houston and Fort Brown, Tex.; resigned December 29, 1863.

Jones, C. A., assistant surgeon, October 14, 1862, Cabell's Battalion Artillery, Virginia.

Jones, John Randolph, assistant surgeon, June 1, 1864, in hospital at Montgomery, Ala.

Jones, John T., assistant surgeon and surgeon, February 5, 1862, in hospitals at Warrenton, Ashland and Gordonsville, Va.; promoted to surgeon August 20, 1864.

Jones, Lafayette J., assistant surgeon, December 4, 1862, in hospitals at Richmond, Warrenton and Petersburg, Va., and Weldon, N. C.

Jones, William Thomas, surgeon, April 4, 1863, in hospitals at Charlottesville, Va.; La Grange, Ga., and Montgomery, Ala.

Jordan, Lafayette Hall, assistant surgeon, August 16, 1862, 4th Virginia Infantry, and in hospitals at Albany, Griffin and Marietta, Ga.; Manassas, Petersburg and Mt. Jackson, Va.

Keffer, William H., assistant surgeon, September 1, 1864, 6th Battalion, Virginia Reserves, and in hospital at Montgomery Springs, Va.

Kellam, Edwin E., assistant surgeon, April 4, 1863, in hospitals at Richmond, Pearisburg, Mt. Jackson, Harrisonburg and Staunton, Va.

Kellum, James, assistant surgeon and surgeon, July 1, 1861, 13th Battalion, Virginia Artillery, and in hospitals at Petersburg and City Point, Va.

Kemble, William E., assistant surgeon and surgeon, February 5, 1862, 42d North Carolina Infantry, 49th Virginia Infantry, 19th Virginia Infantry, and in hospitals at Richmond and Manassas, Va.; promoted to surgeon June 1, 1864.

Kemper, Charles R., surgeon, July 1, 1861, in hospitals at Culpeper Court House and Lynchburg, Va.

Kernan, Edward D., surgeon, July 17, 1861, 48th Virginia Infantry; resigned June 1, 1863.

Kilby, John T., surgeon, May 30, 1863, 3d Georgia Infantry, and in hospitals at Richmond and Petersburg, Va.

King, George M., assistant surgeon and surgeon, October 14, 1862, 62d Virginia Mounted Infantry, and 18th Virginia Cavalry; resigned March 1, 1865.

King, John, assistant surgeon (not found), 115th Virginia Militia.

Kinloch, R. A., surgeon, July 19, 1861, assistant medical director, Charlottesville, Va., and acting medical director, Charleston S. C.

Kinney, Thomas H., assistant surgeon, November 18, 1862, "Stuart Horse Artillery," in hospital at Staunton, Va., and medical director, Army of Northern Virginia.

Klein, J. Alex., assistant surgeon November 16, 1861, 30th Virginia Cavalry and 6th Virginia Cavalry.

Ladd, Charles H., assistant surgeon and surgeon, September 2, 1861, 56th North Carolina Infantry, and in hospitals at Lynchburg, Farmville, Danville, Gordonsville, Manassas and Chaffin's Farm, Va.; Raleigh and Statesville, N. C.; promoted to surgeon September 26, 1862.

Land, Henry G., assistant surgeon, December 4, 1862, in navy, on steamer Richmond, and in hospital at Petersburg, Va.; resigned July 24, 1863.

Lane, Thomas B., assistant surgeon and surgeon, November 16, 1861, 18th North Carolina Infantry, and in hospital at Richmond, Va.; promoted to surgeon March 19, 1862.

Latham, H. Grey, surgeon, November 18, 1862, in hospital at Lynchburg, Va.

Latimer, Edwin W., assistant surgeon, June 1, 1864, in hospital at Richmond, Va.

Lawson, John W., assistant surgeon and surgeon, August 16, 1862, "Hanover Artillery," 12th North Carolina Infantry, and 4th North Carolina Infantry; promoted to surgeon June 1, 1864.

Layne, James, assistant surgeon, February 2, 1864, Louisiana Zouaves, and in hospital at Danville, Va.

Leach, R. V., assistant surgeon and surgeon, November 16, 1861, 2d North Carolina Battalion, and in hospital at Richmond, Va.; promoted to surgeon July 9, 1863.

Leftwich, John W., assistant surgeon and surgeon, April 30, 1862, 17th Virginia Infantry, and in hospital at Richmond, Va.; promoted to surgeon May 4, 1864.

Leigh, H. Gilbert, surgeon, August 16, 1862, 58th Virginia Infantry, 5th Louisiana Infantry, and in hospital at Raleigh, N. C.

Leigh, John R., assistant surgeon and surgeon, April 30, 1862, 3d Virginia Cavalry, and in hospitals at Knoxville, Tenn., and Yorktown, Va.; promoted to surgeon April 29, 1864.

Letcher, F. Marion, assistant surgeon and surgeon, November 16, 1861, 3d Virginia Reserves, and in hospitals at Lynchburg, Gordonsville, Manassas, Liberty, Charlottesville and Farmville, Va.; promoted to surgeon January 1, 1865.

Lewis, Granville R., assistant surgeon, July 13, 1863, Coit's Battalion, Artillery, and in hospital at Danville, Va.

Lewis, George W., assistant surgeon, October 2, 1861, 47th Virginia Infantry; resigned July 28, 1863.

Lewis, John, assistant surgeon and surgeon, September 2, 1861, 9th Virginia Militia, 87th Virginia Militia, 52d Virginia Infantry, and in hospital at Gloucester Point, Va.; promoted to surgeon October 14, 1862.

Lewis, Maginnis M., surgeon, July 1, 1861, 17th Virginia Infantry, and medical director, Petersburg, Va.

Lewis, Richard, assistant surgeon, April 17, 1862, 7th Georgia Infantry, and in hospital at Manassas, Va.

Lewis, Richard A., assistant surgeon and surgeon, July 17, 1861, 21st Virginia Infantry, and 3d Georgia Infantry, and in hospital at Richmond, Va.; promoted to surgeon November 17, 1861.

Lewis, Robert S., assistant surgeon and surgeon, July 1, 1861, 4th Virginia Infantry, 13th Virginia Infantry, and in hospitals at Richmond and Lynchburg, Va., and Greensboro, N. C.; promoted to surgeon, October 9, 1862.

Ligon, John, assistant surgeon, January 28, 1865, 19th Virginia Cavalry.

Lippett, Charles E., assistant surgeon and surgeon, September 2, 1862, 57th Virginia Infantry, and in hospital at Manassas, Va.; promoted to surgeon October 29, 1861.

Logan, James P., assistant surgeon and surgeon, September 2, 1861, in hospitals at Augusta, Atlanta and Marietta, Ga., and Richmond, Va.; promoted to surgeon (date not stated).

Loring, Sidney, assistant surgeon (not found), 28th Virginia Militia.

Luck, William Jordan, assistant surgeon and surgeon, August 16, 1862, "Petersburg Artillery," Virginia, and in hospitals at Lynchburg and Staunton, Va.; promoted to surgeon (date not stated).

Lupton, S. R., surgeon, September 13, 1861, 77th Virginia Militia.

Lyons, Peter, assistant surgeon and surgeon, June 5, 1861, 46th Virginia Infantry, and in hospitals at Richmond and White Sulphur Springs, Va.; promoted to surgeon September 17, 1861.

Madison, R. L., surgeon, July 3, 1861, in hospital at Orange Court House, Va.

Magruder, George W., assistant surgeon (not found), 146th Virginia Militia, and in hospitals at Staunton, Winchester, Culpeper Court House and Lovingston, Va.

Marshall, Thomas, assistant surgeon, July 19, 1861, 1st Kentucky Infantry.

Marston, William W., assistant surgeon, September 26, 1862, 12th North Carolina Infantry, and in hospital at Richmond, Va.

Martin, A. S., assistant surgeon, July 11, 1863, Jackson's Battery, Virginia.

Mason, A. S., assistant surgeon and surgeon, July 1, 1861, in hospitals at Richmond and Fredericksburg, Va., medical director Department of Richmond, and chief surgeon, Richmond, Va.

Mason, Edmunds, assistant surgeon and surgeon, September 1, 1861, 4th Virginia Artillery and 34th Virginia Infantry; promoted to surgeon May 21, 1862.

Mason, John T., surgeon, June 10, 1861, in navy, on steamer Baltic.

Mason, Richard, surgeon, July 19, 1861, (not known); resigned December 7, 1861.

Mason, R. F., surgeon, June 14, 1861, in navy; died August 9, 1862.

Mason, T. H., assistant surgeon July 31, 1862, 64th Virginia Infantry.

Massie, Edmund L., surgeon, February 17, 1862, in hospital at Little Rock, Ark.

Mathews, Thomas P., assistant surgeon, April 17, 1862, 1st Virginia Infantry, and in hospitals at Farmville and Manassas, Va.; resigned April 4, 1863.

Mathews, F. P., assistant surgeon (not found), 4th Virginia Reserves.

Mathews, Thomas M., assistant surgeon and surgeon, June 24, 1862, 15th Texas Cavalry and 12th Texas Cavalry; promoted to surgeon September 15, 1862.

Maury, Thomas F., assistant surgeon and surgeon, July 1, 1861, 1st Virginia Infantry, "Loudoun Artillery," "Latham's Battery," Longstreet's Corps, and in hospital at Richmond, Va.; promoted to surgeon February 5, 1862.

May, Bushrod L., assistant surgeon, April 17, 1862, "Rockbridge Artillery," Virginia, 37th Virginia Infantry, and in hospitals at Winchester and Orange Court House, Va.; resigned October 10, 1862.

May, E. W., assistant surgeon, April 17, 1862 (not known).

Mayfield, B., assistant surgeon, February 2, 1864, "Thomas Legion," North Carolina.

Mayo, Albert S., assistant surgeon, April 17, 1862, in hospitals at Lynchburg, Manassas, Gordonsville, Orange Court House and Hanover Court House, Va.

Mayo, John C., assistant surgeon (not found), 1st Company, "Richmond Howitzers," and in hospital at Richmond, Va.

Mayo, Littleton U., assistant surgeon and surgeon, November 16, 1861, in hospital at Buchanan, Va.; promoted to surgeon June 4, 1862; dismissed by court-martial, September 13, 1864.

Mayo, Marion L., assistant surgeon, July 11, 1863, 28th North Carolina Infantry, 33d North Carolina Infantry, and in hospital at Richmond, Va., and Charlotte, N. C.

Mayo, Theodk. P., surgeon, November 18, 1862, 3d Virginia Infantry, and senior surgeon Kemper's Brigade.

McAlpine, James N., surgeon, July 1, 1861, 38th Virginia Infantry, 57th Virginia Infantry, and chief surgeon 1st Brigade, 1st Division, Army of Potomac.

McCaw, James B., surgeon, October 9, 1861, in hospital at Richmond, Va.

McChesney, William S., assistant surgeon and surgeon, September 13, 1861, 27th Virginia Infantry, and in hospital at Staunton, Va.

McClenahan, William F., surgeon, June 10, 1861, in navy, and in hospitals at Richmond, Va., and Charlotte, N. C.

McClung, Joseph, assistant surgeon, September 13, 1861, in hospital at Berryville, Va.

McConkey, Samuel A., surgeon, July 1, 1861, 28th Virginia Infantry.

McDonald, George, surgeon, July 1, 1861, 22d Virginia Infantry, and chief surgeon, Wharton's Division.

McGary, P. J., surgeon (not found), 67th Virginia Militia.

McGinnis, A. B., surgeon (not found), 17th Virginia Cavalry.

McGruder, G. W., assistant surgeon, September 2, 1861, 146th Virginia Militia.

McGuire, Hunter, surgeon (not found), 33d Virginia Infantry, and in hospital at Charlottesville, Va., and medical director, Valley District.

McGuire, Hugh H., surgeon, July 1, 1861, in hospitals at Winchester and Lexington, Va.

McGuire, James M. G., assistant surgeon and surgeon, July 1, 1861, 1st Battalion, Virginia Infantry (Regulars), 44th North Carolina Infantry, and in hospitals at Richmond, Culpeper, Lynchburg and Manassas, Va.; promoted to surgeon November 3, 1862.

McIlhaney, J. W., assistant surgeon, September 13, 1861, 8th Georgia Infantry, Garnett's Battalion, Virginia Artillery, and in hospital at Warrenton, Va.; resigned October 10, 1862.

McKennie, H., assistant surgeon, May 5, 1863 (not known).

McKennie, Marcellus, assistant surgeon, August 27, 1863, in hospitals at Richmond and Charlottesville, Va.

McLean, John K., assistant surgeon and surgeon, April 17, 1862, 61st Virginia Infantry, and in hospitals at Richmond, Danville, Gordonsville and Manassas, Va.; promoted to surgeon November 27, 1862.

McNemar, Martin R., assistant surgeon, June 2, 1861, "South Branch Riflemen" and Company K, 25th Virginia Infantry.

McPherson, Samuel M., assistant surgeon, September 13, 1861, 59th Virginia Infantry.

Meade, H. Bayliss, assistant surgeon, July 17, 1861, 1st Battalion, Virginia Infantry, and in hospitals at Richmond, Danville, Staunton, Culpeper, Va., and Wilmington, N. C.

Medway, Alex. R., surgeon, February 15, 1862, in hospitals at Wilmington and Goldsboro, N. C.; dropped May 31, 1862.

Meiere, William S., surgeon, September 13, 1861, 42d Virginia Infantry, and in hospitals at Hardeeville, S. C., and Madison, Ga.; dropped (date not stated).

Mercer, John C., surgeon, June 12, 1863, in hospital at Lynchburg, Va.

Meredith, Samuel, surgeon, July 1, 1861, 5th Virginia Cavalry, 2d Virginia Cavalry, and in hospital at Richmond, Va.; resigned October 10, 1861.

Merillat, J. C. M., assistant surgeon and surgeon, July 19, 1861, in hospital at Staunton, Va.; promoted to surgeon November 16, 1861.

Merritt, William T., assistant surgeon, November 13, 1861, 6th Virginia Infantry.

Metcalfe, Orrick, surgeon, November 2, 1861, in hospital at Cahaba, Ala.

Mettauer, Francis J., surgeon (not found), Virginia State Line.

Michie, Junius, assistant surgeon and surgeon, October 16, 1861, 4th Virginia Cavalry, 15th Georgia Infantry and 4th North Carolina Cavalry; promoted to surgeon May 16, 1863.

Michie, Theodore A., assistant surgeon, February 5, 1862, "Everett Artillery," Virginia, and in hospitals at Staunton, Lynchburg and Charlottesville, Va.

Michie, W. E., assistant surgeon, April 30, 1862, "Holcombe Legion," South Carolina, and in hospital at Richmond, Va.

Miller, A. S., surgeon, September 2, 1861, 25th Virginia Infantry, 136th Virginia Militia, 21st Virginia Infantry, 44th Virginia Infantry, and 42d Virginia Infantry.

Miller, Thomas M., surgeon (not found), 51st Virginia Militia.

Minge, John, assistant surgeon, October 14, 1862, in hospital at Richmond, Va.

Minor, John, surgeon, September 11, 1861, 5th Virginia Infantry, and in hospitals at Lynchburg, Harrisonburg and Staunton, Va., and Tallahassee, Fla.

Minor, Lewis W., surgeon, June 10, 1861, in navy at Mobile, Ala.

Moffett, George B., surgeon, July 10, 1863, 49th Virginia Infantry, 37th North Carolina Infantry, and "Courtney Artillery," Virginia.

Moffett, Samuel H., surgeon (not found), 10th Virginia Infantry.

Montague, T. C., assistant surgeon, February 5, 1862, in hospital at Emory, Va.

Monteiro, Aristides, assistant surgeon and surgeon, August 16, 1862, 26th Virginia Infantry, and 31st Battalion Virginia Artillery; promoted to surgeon June 7, 1864.

Moore, R. E., assistant surgeon, November 5, 1861, 29th Virginia Infantry.

Moore, William J., surgeon, July 1, 1861, in hospitals at Richmond and Liberty, Va.

Moorman, Thomas E., assistant surgeon, July 19, 1862, 5th Alabama Infantry, and Walker's Battalion Artillery, Virginia; resigned July 16, 1863; again appointed June 1, 1864.

Morfit, Charles M., assistant surgeon, June 10, 1861, in navy.

Morgan, William T., assistant surgeon, December 14, 1862, 64th Virginia Infantry.

Morris, William, assistant surgeon, April 4, 1863, 15th Virginia Infantry.

Morris, William M., assistant surgeon, November 16, 1861, Medical Examining Board, Fourth Congressional District, Virginia.

Morrison, Samuel B., surgeon, October 9, 1861, 58th Virginia Infantry, and chief surgeon, Early's Division.

Morse, Tully D., assistant surgeon, December 10, 1862, 18th Battalion Artillery, and 19th Battalion Artillery, Virginia.

Morson, John A., assistant surgeon, July 19, 1861, 10th Virginia Infantry, 4th Alabama Infantry, and in hospitals at Jackson, Miss., and Manassas, Va.

Morton, Charles B., assistant surgeon and surgeon, July 1, 1861, 7th Virginia Infantry; promoted to surgeon February 5, 1862.

Moseley, Charles F., assistant surgeon and surgeon, June 3, 1861, 14th Virginia Infantry; promoted to surgeon August 11, 1862; resigned June 5, 1863.

Moseley, E. Julian, assistant surgeon, April 17, 1862, 18th Virginia Infantry, "Cutshaw's Battalion," Virginia Artillery and in hospitals at Richmond, Lynchburg and Huguenot Springs, Va.

Moseley, J. S., assistant surgeon, May 28, 1864, 47th Virginia Infantry.

Mott, A. R., surgeon, July 19, 1861, 2d Virginia Cavalry, and in hospitals at Leesburg, and Lynchburg, Va., and medical purveyor, Department of North Carolina; resigned May 3, 1864.

Mount, John E., surgeon (not found), 132d Virginia Militia.

Munson, R. A. B., assistant surgeon, February 5, 1862, 2d Virginia Infantry.

Murdock, Russell, assistant surgeon and surgeon, June 2, 1863, 1st Regiment Engineers, Virginia, and in hospital at Richmond, Va.; promoted to surgeon September 3, 1864.

Murphy, A. S., assistant surgeon and surgeon, November 16, 1861, 20th Alabama Infantry; promoted to surgeon April 13, 1864.

Murray, James H., surgeon, July 19, 1861, 49th Virginia Infantry, and in hospitals at Lynchburg and Warrenton, Va.

Nash, Herbert M., assistant surgeon and surgeon, July 1, 1861, 9th Virginia Infantry, 61st Virginia Infantry, and Poague's Battalion, Virginia Artillery; promoted to surgeon, October 14, 1862.

Neblett, Sterling, Jr., surgeon, July 1, 1861, 24th Virginia Infantry; resigned August 23, 1862.

Neill, S. S., surgeon, November 18, 1862, 31st Virginia Militia, and in hospitals at Staunton, Winchester, Charlottesville and Lovingston, Va.; resigned March 31, 1864.

Nelson, John A., assistant surgeon, April 4, 1863, 30th Virginia Cavalry, and in hospitals at Mount Jackson and Winchester, Va.

Nelson, T. Walker, assistant surgeon, June 2, 1863 (not known); dropped (date not stated).

Nelson, William A., surgeon, June 19, 1862, 12th Battalion Louisiana Artillery, and in hospital at Richmond, Va.; resigned February 12, 1863.

Nesbitt, A. M., surgeon, June —, 1861, 53d Virginia Infantry, 6th North Carolina Reserves, 26th North Carolina Infantry, and in hospitals at Richmond, Williamsburg and Winchester, Va., and Smithville, N. C.

Nevitt, Napoleon B., assistant surgeon, February 17, 1862, 49th Virginia Infantry, and 38th Battalion Virginia Artillery.

Newell, William H., assistant surgeon, June 13, 1863, in hospital at Mount Jackson, Va.; dropped January 23, 1864.

Newman, G. S., surgeon, July 1, 1861, 1st Virginia Light Artillery, and 4th Virginia Infantry; resigned November 27, 1861.

Newton, John B., assistant surgeon and surgeon, July 19, 1861, 40th Virginia Infantry; promoted to surgeon December 29, 1862; resigned November 20, 1863.

Newton, Thomas, surgeon, July 19, 1861, 6th Virginia Infantry; resigned October 28, 1861.

Noel, Henry R., assistant surgeon and surgeon, September 13, 1861, 60th Virginia Infantry; promoted to surgeon November 16, 1861.

Nowlin, William S., assistant surgeon, June 11, 1863, 38th Virginia Infantry, and in hospital at Richmond, Va.

Oden, John B., assistant surgeon and surgeon, September 13, 1861, 1st Virginia Cavalry, 3d Mississippi Cavalry, and in hospitals at Leesburg and Lynchburg, Va.; promoted to surgeon, November 26, 1862; retired May 28, 1864.

Oliver, James W., assistant surgeon, December 4, 1862, 24th Virginia Infantry, 7th Virginia Infantry, and in hospitals at Winchester, Va.

Opie, Thomas, assistant surgeon, September 13, 1861, 25th Virginia Infantry, and in hospital at Staunton, Va.

Osborne, James E., assistant surgeon and surgeon, November 16, 1861, 12th North Carolina Infantry; resigned January 24, 1862; appointed surgeon February 17, 1862.

Owen, George A., assistant surgeon, February 2, 1864, 35th North Carolina Infantry, and in hospital at Richmond, Va.

Owen, William O., surgeon, June 29, 1861, in hospital at Lynchburg, Va.

Overton, William M., assistant surgeon, October 11, 1861, 63d Virginia Infantry, and in hospital at Richmond, Va.; resigned October 1, 1862.

Page, Isham Randolph, assistant surgeon and surgeon, July 1, 1861, 18th Virginia Infantry, and in hospital at Yorktown, Va., and with Pendleton's Artillery Corps; promoted to surgeon February 5, 1862.

Page, John R., assistant surgeon and surgeon, July 19, 1862, in hospitals at Lynchburg, Richmond and Burkeville, Va.; promoted to surgeon February 5, 1862.

Page, Robert P., assistant surgeon and surgeon, July 1, 1861, 6th Virginia Infantry, and in hospitals at Petersburg and Richmond, Va., and Fort Caswell, N. C.; promoted to surgeon November 15, 1861.

Page, William M., surgeon, August 28, 1862, in navy, on steamer Alabama.

Pallen, Montrose A., surgeon, June 5, 1861, "Wise Legion," Virginia, and medical director, Jackson, Miss.

Palmer, William P., surgeon, August 16, 1862, 56th Virginia Infantry, 54th Virginia Infantry, and in hospital at Camp Lee, Va.

Parks, John, surgeon, July 13, 1863 (not known).

Parrish, James, surgeon, November 16, 1861, 41st Virginia Cavalry and 13th Virginia Cavalry.

Patrick, Alfred S., assistant surgeon and surgeon, February 2, 1864, 2d Virginia Infantry and 22d Virginia Infantry; promoted to surgeon November 14, 1864.

Patton, William F., surgeon, June 10, 1861, in navy, and in hospital at Charleston, S. C.

Payne, I. T., assistant surgeon (not found), 11th Battalion Virginia Reserves, and 1st Battalion Maryland Cavalry.

Payne, Richard A., surgeon, July 12, 1861, 40th Virginia Infantry, and in hospitals at Richmond, Lynchburg and Manchester, Va.; resigned December 6, 1861.

Peachy, St. George, surgeon, June 15, 1861, in hospital at Richmond, Va.

Peebles, R. S. J., assistant surgeon and surgeon, September 26, 1862 (cancelled), in hospitals at Richmond and Petersburg, Va.; appointed surgeon June 12, 1863.

Peek, William Hope, assistant surgeon and surgeon, February 5, 1862, 2d Virginia Cavalry, and in hospitals at Orange Court House and Manassas, Va.; promoted to surgeon July 9, 1863; died at Williamsport, Md., July 14, 1863.

Pegram, William E., assistant surgeon, April 30, 1862, 4th Alabama Infantry.

Pendleton, Edmund S., assistant surgeon, June 2, 1863, in hospitals at Raleigh, Statesville and Camp Stokes, N. C.

Pendleton, John S., assistant surgeon, June 9, 1862, 63d Virginia Infantry and 45th Virginia Battalion.

Perkins, P. P., assistant surgeon (not found), 1st Battalion Virginia Reserves, and in hospitals at Richmond and Gordonsville, Va.

Perry, Van Lear, assistant surgeon, October 29, 1861, 57th Virginia Infantry, and in hospitals at Manassas, Va., and Opelika, Ala.

Peticolas, A. E., surgeon, July 1, 1861, in hospital at Richmond, Va.

Peyton, E. O., surgeon (not found), 88th Virginia Militia, and in hospital at Charlottesville, Va.

Phillips, Dinwiddie B., surgeon, June 10, 1861, in navy on steamer Richmond, and on steamer Tennessee.

Piggot, A. Snowden, surgeon, September 26, 1862, in hospital at Lincolnton, N. C.

Piggot, William McClung, assistant surgeon and surgeon, April 17, 1862, 24th Georgia Infantry and 46th North Carolina Infantry, and in hospital at Petersburg, Va., and Knoxville, Tenn.; promoted to surgeon March 9, 1863. (Cancelled by surgeon-general.) Again promoted to surgeon November 4, 1864.

Pinkard, H. M., assistant surgeon, November 3, 1864, in hospitals at Richmond and Palmyra, Va.

Pollard, Edward, assistant surgeon, April 4, 1863, 57th Virginia Infantry, and Garnett's Battalion, Virginia Artillery; declined appointment. Again appointed February 2, 1864.

Pollard, James R., assistant surgeon, July 13, 1861, "Hampton Legion," South Carolina; resigned January 22, 1862.

Powell, Alfred H., assistant surgeon and surgeon, July 1, 1861, 16th Virginia Infantry and 19th Virginia Infantry; promoted to surgeon February 17, 1862.

Powell, John S., assistant surgeon, July 19, 1861, 49th Virginia Infantry; resigned February 1, 1863.

Power, Robert H., assistant surgeon (not found), 115th Virginia Militia.

Price, William B. K., assistant surgeon, October 12, 1861, 25th Virginia Militia.

Price, William H., assistant surgeon, October 14, 1862, 7th Virginia Cavalry.

Prichitt, W. B. F., assistant surgeon (not found), 60th Virginia Infantry.

Proctor, Thomas Albert, surgeon, August 16, 1862, 41st Virginia Infantry, 3d Georgia Infantry, and in hospitals at Richmond and Petersburg, Va.; resigned May 19, 1863.

Putney, William R., assistant surgeon, February 5, 1862, in hospital at Richmond, Va.; resigned November 22, 1862.

Quesenberry, Vivian, Jr., assistant surgeon, August 16, 1862, 28th Virginia Infantry, 56th Virginia Infantry, 59th Virginia Infantry, and in hospitals at Richmond, Chaffin's Bluff and Huguenot Springs, Va.

Randolph, A. C., assistant surgeon and surgeon, July 1, 1861, 1st Virginia Cavalry, 1st Virginia Infantry, and in hospital at Winchester, Va., and Chief-Surgeon, Lee's Division Cavalry; promoted to surgeon September 26, 1862.

Randolph, W. C. N., surgeon, July 1, 1861, Howitzer Battalion, Virginia, and in hospitals at Lynchburg, Gordonsville and Yorktown, Va.

Raymond, Edward F., assistant surgeon, November 3, 1864, McLaughlin's Artillery Battalion, Virginia.

Read, Adolphus E., surgeon, July 19, 1862 (not known).

Read, A. W., assistant surgeon, July 18, 1861, 34th Virginia Militia.

Read, John L., assistant surgeon, August 27, 1863, 34th Virginia Militia, and in hospitals at Gordonsville and Petersburg, Va.

Read, N. M., assistant surgeon, July 1, 1861, in hospitals at Richmond, Culpeper Court House and Lynchburg, Va.; resigned October 15, 1862.

Rice, Francis E., assistant surgeon, September 2, 1861, 136th Virginia Militia; resigned February 12, 1862.

Rice, John H., assistant surgeon, October 14, 1862, in hospital at Lewisburg, Va.

Richards, George W., assistant surgeon, August 16, 1862, Garnett's Battalion, Virginia Artillery, and Cape Fear Artillery, N. C.

Richards, John S., assistant surgeon, September 26, 1862, 88th Virginia Militia, 34th North Carolina Infantry, 38th North Carolina Infantry, and 16th North Carolina Infantry; resigned November 21, 1863.

Richardson, Charles T., assistant surgeon, June 11, 1863, 28th Virginia Infantry, and in hospitals at Staunton and Lynchburg, Va.

Richardson, Robert B., assistant surgeon, February 2, 1864, 10th Battalion, Virginia Artillery, and hospital at Richmond, Va.

Richerson, F. B., assistant surgeon and surgeon, July 19, 1861, 30th Virginia Infantry; promoted to surgeon October 14, 1862; retired March 19, 1864; died February 10, 1865.

Ritenour, Milton, assistant surgeon, February 5, 1862, in hospitals at Wilmington and Smithville, N. C., and Culpeper Court House, Va.

Rives, Alex., assistant surgeon and surgeon, July 19, 1861, 61st North Carolina Infantry, 15th Alabama Infantry, and in hospitals at Charlottesville and Front Royal, Va., and Wilmington, N. C.; promoted to surgeon June 1, 1864.

Rives, Ed., assistant surgeon and surgeon, July 1, 1861, 28th Virginia Infantry, 56th Virginia Infantry, 1st Battalion Invalid Corps, and in hospital at Richmond, Va.; promoted to surgeon January 13, 1863.

Rives, Landon, surgeon, July 1, 1861, 1st Virginia Cavalry, and in hospitals at Manassas and Warrenton Springs, Va.; died March 18, 1862.

Rixey, Samuel R., assistant surgeon and surgeon, September 2, 1861, 1st Virginia Artillery, and in hospitals at Culpeper Court House and Lynchburg, Va., and Raleigh, N. C.; promoted to surgeon October 15, 1862; resigned March 14, 1863.

Roan, Preston, assistant surgeon, June 1, 1864, 26th Battalion, Virginia Infantry.

Roane, Junius, assistant surgeon and surgeon, September 2, 1861, 3d Virginia Cavalry, and 2d Virginia Cavalry; promoted to surgeon June 1, 1864.

Roberts, George H., assistant surgeon (not found), 1st Battalion, Virginia Reserves, and in hospitals at Richmond, Va.

Robertson, Archibald M., assistant surgeon, June 1, 1864, 40th North Carolina Infantry, and in hospitals at Wilmington and Fort Caswell, N. C.

Robertson, William B., assistant surgeon, June 27, 1861, 45th Virginia Infantry, and in hospitals at Wytheville and Lewisburg, Va.

Robertson, William H., assistant surgeon and surgeon, September 13, 1861, 4th Virginia Cavalry, 41st North Carolina Infantry, and in hospitals at Cuthbert and Covington, Ga.; promoted to surgeon October 14, 1862.

Robinson, Logan H., assistant surgeon, June 11, 1863, 40th Virginia Infantry.

Robinson, P. Genais, assistant surgeon and surgeon, November 13, 1861, 1st South Carolina, and 3d Alabama Infantry; promoted to surgeon July 19, 1862.

Robinson, Thomas L., assistant surgeon, February 5, 1862 (not known); appointment cancelled.

Roddey, F. W., assistant surgeon and surgeon, November 13, 1861, in hospitals at Richmond, Va., and Wilson, N. C.; promoted to surgeon February 17, 1863.

Ross, George, assistant surgeon, February 5, 1862, in hospital at Richmond, Va.; resigned January 4, 1864.

Rowe, Elhanon W., assistant surgeon and surgeon, April 30, 1862, Jackson's Squadron, Virginia Cavalry, 14th Virginia Cavalry, and in hospitals at Orange Court House and Salem, Va.; promoted to surgeon March 14, 1863.

Rowzie, A. R., assistant surgeon, November 3, 1864, in hospitals at Columbia, S. C., and Andersonville, Ga.

Russell, David S., assistant surgeon, July 11, 1863, 23d North Carolina Infantry, and in hospital at Farmville, Va.

Rust, J. M., assistant surgeon, February 5, 1862 (not known).

Saunders, Walter, assistant surgeon, July 1, 1861, in hospital at Richmond, Va.

Sayers, Samuel R., assistant surgeon and surgeon, July 1, 1861, 4th Virginia Infantry and 27th Virginia Infantry; promoted to surgeon November 8, 1861.

Scarburgh, George T., assistant surgeon, September 14, 1861, 59th Virginia Infantry, and in hospitals at Chaffin's Bluff and Richmond, Va.

Scott, A. Howard, assistant surgeon and surgeon, February 5, 1862, 4th Alabama Infantry and 4th Texas Infantry; promoted to surgeon June 1, 1862.

Scott, Harry B., assistant surgeon, November 8, 1861, 41st Virginia Militia.

Scott, Martin P., surgeon, July 1, 1861, 15th Virginia Infantry, and in hospitals at Richmond, Williamsburg, Warrenton Springs, Petersburg, Gordonsville, Lynchburg, Staunton and Yorktown, Va.

Scott, Peter F., assistant surgeon, January 28, 1865, in hospital at Richmond, Va.

Scott, William Samuel, surgeon, May 30, 1863, in hospital at Richmond, Va.

Seargeant, Henry H., assistant surgeon, September 26, 1862, 1st Virginia Infantry, 4th Alabama Infantry, 48th Alabama Infantry, and in hospital at Richmond, Va.

Selden, Charles, assistant surgeon, October 16, 1861, in hospital at Richmond, Va.

Selden, William, surgeon, May 30, 1863, in hospital at Liberty, Va.

Semple, George W., surgeon, July 1, 1861, 32d Virginia Infantry, and in hospitals at Richmond and Williamsburg, Va.

Semple, James, assistant surgeon and surgeon, November 13, 1861, 31st Battalion Virginia Artillery.

Settle, Thomas L., assistant surgeon and surgeon, June 17, 1861, 7th Virginia Cavalry, 17th Battalion Virginia Cavalry, 11th Virginia Cavalry, and in hospital at Winchester; promoted to surgeon April 3, 1863.

Shackelford, J. F., assistant surgeon (not found), 38th Battalion Virginia Artillery, 48th Virginia Infantry, and in hospital at Eufaula, Ala.

Shackelford, W. Carr, assistant surgeon, June 11, 1863, 2d Virginia Cavalry.

Shaffers, Edward, assistant surgeon, August 4, 1863 (not known).

Shepherd James B., assistant surgeon, July 13, 1863, 5th Virginia Cavalry, 8th Virginia Cavalry, and in hospital at Richmond, Va.

Sheppard, E., surgeon, September 26, 1862, in hospitals at Andersonville, Ga.; Notasulga, Ala., and Staunton, Va.

Shields, Thomas P., assistant surgeon, June 11, 1863, in hospital at Richmond, Va.

Shield, William Henry, assistant surgeon and surgeon, August 16, 1862, 32d Virginia Infantry; promoted to surgeon February 16, 1863.

Simkins, James J., surgeon, June 13, 1863, in hospitals at Richmond, Va., and Charleston, S. C.

Sinclair, William B., surgeon, June 10, 1861, in navy.

Sitman, Charles M., assistant surgeon, December 4, 1862, in hospitals at Dalton and LaGrange, Ga.; West Point, Miss., and Union Springs, Ala.

Slater, Leonard A., assistant surgeon and surgeon, April 17, 1862, 15th Virginia Cavalry, and in hospitals in Richmond, Va., and Salisbury, N. C.; promoted to surgeon October 20, 1862.

Slaughter, Alfred E., assistant surgeon, October 9, 1861, 58th Virginia Infantry, and in hospital at Lynchburg, Va.

Smith, Charles, assistant surgeon, December 4, 1862, in hospital at Talladega, Ala.

Smith, Charles H., surgeon, May 24, 1861, in hospitals at Richmond, Va., and Little Rock, Ark.

Smith, Daniel B., assistant surgeon, September 26, 1861, in hospitals at Richmond and Lynchburg, Va.

Smith, Edward, surgeon (not found), 103d Virginia Militia.

Smith, John, assistant surgeon, September 13, 1861, 2d Virginia Infantry.

Smith, J. P., surgeon, July 1, 1861, 2d Virginia Infantry, and in hospitals at Petersburg, Winchester, Staunton, Mt. Jackson and Lovingston, Va.

Smith, Samuel C., assistant surgeon, April 30, 1862, in hospitals, Farmville and Richmond.

Smith, Thomas, assistant surgeon, December 4, 1862, 18th Battalion, Virginia Artillery, 20th Battalion, Virginia Artillery, and in hospital at Richmond, Va.

Smith, William G., assistant surgeon, October 9, 1861, 39th Virginia Infantry.

Snead, Albert H., assistant surgeon and surgeon, October 15, 1861, 21st Virginia Infantry, 5th Battalion, Virginia Infantry, and in hospitals at Macon and Atlanta, Ga.; promoted to surgeon February 5, 1862.

Sneed, John C., assistant surgeon, July 11, 1863, in hospital at Montgomery, Ala.

Snell, A. B., surgeon, August 25, 1863, 16th Mississippi Infantry, and 12th Mississippi Infantry.

Snowden, Harold, assistant surgeon and surgeon, July 1, 1861, 17th Virginia Infantry, and in hospital at Manassas, Va.; promoted to surgeon January 19, 1863.

Southall, James H., assistant surgeon, September 20, 1861, 55th Virginia Infantry; promoted to surgeon July 9, 1862.

Southgate, Robert, surgeon, July 1, 1861, in hospital at Richmond, Va., and medical director, Norfolk, Va.

Spence, William A., Jr., surgeon, September 18, 1861, 40th Virginia Infantry, 47th Virginia Infantry, and in hospitals at Richmond and Montgomery Springs, Va.

Spencer, J. T., assistant surgeon, February 5, 1862, 50th Virginia Infantry, and in hospitals at Farmville and Newbern, Va.; resigned August 2, 1862.

Stalnaker, J. W., assistant surgeon, October 14, 1862, 36th Virginia Infantry, 16th Virginia Cavalry, and 22d Virginia Cavalry; resigned September 20, 1864.

Starke, G. C., assistant surgeon, July 1, 1861, in hospitals at Jamestown, Va., and 2d Congressional District, Virginia; resigned November 26, 1861.

Starry, John D., assistant surgeon and surgeon, January 1, 1862, 7th Virginia Cavalry; promoted to surgeon October 14, 1862.

Steel, David, assistant surgeon, December 4, 1862, 38th Battalion, Virginia Artillery, and in hospitals at Petersburg, Lynchburg and Gordonsville, Va.

Stoakley, William S., assistant surgeon, September 24, 1861, 39th Virginia Infantry, and in hospitals at Richmond and Petersburg, Va.; resigned January 2, 1861.

Stockdell, Hugh, assistant surgeon and surgeon, July 19, 1861, in hospitals at Petersburg, Va.; Raleigh and Wilmington, N. C.; promoted to surgeon February 2, 1864.

Strachan, I. B., surgeon, July 19, 1861, 32d North Carolina Infantry, and in hospital at Petersburg, Va.

Straith, John A., assistant surgeon and surgeon (not found), chief surgeon, 2d Corps, Army of Northern Virginia; promoted to surgeon November 2, 1861.

Stribling, Robert McK., assistant surgeon, July 10, 1863, 36th Virginia Infantry, 8th Virginia Cavalry, and in hospitals at Magnolia, Miss., and Marion, Ala.

Strickler, William M., assistant surgeon, April 17, 1862, 52d Virginia Infantry, 5th Louisiana Infantry, and in hospital at Warrenton Va.

Stuart, John D., assistant surgeon, November 17, 1862, 54th Virginia Infantry, and in hospitals at Warrenton, Manassas and Charlottesville, Va.

Swann, S. R., assistant surgeon and surgeon, July 1, 1861, 22d Virginia Infantry, 46th Virginia Infantry, and "Wise Legion," Virginia Artillery; promoted to surgeon September 13, 1861.

Swann, William M., assistant surgeon and surgeon, April 17, 1862, 6th Georgia Infantry, and 19th Georgia Infantry; promoted to surgeon August 30, 1864.

Sykes, J. H. M., assistant surgeon, November 18, 1862, 3d Virginia Infantry.

Taber, C. H., assistant surgeon, July 19, 1861, 7th South Carolina Battalion, and in hospital at Charleston, S. C.

Taliaferro, Horace D., surgeon, February 17, 1862, in hospitals at Orange Court House and Farmville, Va.

Taliaferro, P. A., surgeon (not found), 21st Virginia Militia.

Taliaferro, Robert P., assistant surgeon, August 16, 1862, in hospitals at Lynchburg and Staunton, Va.; resigned November 27, 1862.

Tanner, Isaac S., surgeon, February 5, 1862, 21st North Carolina Infantry, and in hospital at Manassas, Va.

Tatum, R. Herbert, surgeon (not found), 5th Battalion, Virginia Reserves.

Taylor, Archibald, surgeon, June 12, 1863, 44th Georgia Infantry, 1st Texas Infantry, and in hospital at Richmond, Va.

Taylor, Bushrod, surgeon, November 11, 1861, 122d Virginia Militia, 14th Georgia Infantry, 8th Georgia Infantry, 16th North Carolina Infantry, and in hospital at Winchester, Va.

Taylor, John B., assistant surgeon and surgeon, July 1, 1861, 14th Virginia Infantry, and 54th Virginia Infantry; promoted to surgeon September 11, 1861.

Taylor, R. Kidder, assistant surgeon and surgeon, July 1, 1861, 37th Virginia Infantry, and in hospital at Lynchburg, Va.; promoted to surgeon November 13, 1861.

Taylor, T. James, assistant surgeon, June 1, 1864, "Jeff Davis Legion," Mississippi.

Taylor, Thomas L., assistant surgeon, February 5, 1862, 9th Virginia Cavalry, 10th Virginia Infantry, and in hospital at Manassas, Va.

Taylor, William H., assistant surgeon and surgeon, February 5, 1862, 19th Virginia Infantry, 8th Virginia Infantry, and 17th Georgia Infantry; promoted to surgeon August 31, 1864.

Tebbs, Thomas F., assistant surgeon, November 4, 1861, 8th Virginia Infantry, and in hospitals at Richmond and Leesburg, Va., and Raleigh, N. C.

Temple, Thomas P., assistant surgeon and surgeon, July 1, 1861, 6th Virginia Infantry, 61st Virginia Infantry, 53d Virginia Infantry, and in hospital at Richmond, Va.; promoted to surgeon July 16, 1862; dropped February 17, 1863.

Templeton, James A., assistant surgeon and surgeon, November 18, 1862, 22d Virginia Infantry, 45th Virginia Infantry, 36th Virginia Infantry, 23d Battalion, Virginia Infantry, 4th Battalion, Virginia Reserves, and in hospital at Montgomery Springs, Va.; promoted to surgeon May 1, 1863.

Terrell, John J., assistant surgeon, December 4, 1862, in hospital at Lynchburg, Va.

Terrill, Robert M., assistant surgeon and surgeon September 21, 1861, 9th Georgia Infantry, and in hospitals at Culpeper Court House, Manassas and Richmond, Va.; promoted to surgeon January 30, 1864.

Thom, William A., surgeon, September 12, 1861, 39th Virginia Infantry, and in hospital at Richmond, Va.

Thomas, William M., assistant surgeon, July 11, 1861, 50th Virginia Infantry, and in hospital at White Sulphur Springs, Va.; died November 26, 1861.

Thompson, Andrew W., assistant surgeon and surgeon (not found), 6th Virginia Cavalry.

Thompson, William J., assistant surgeon, October 14, 1862, 19th Virginia Cavalry; resigned February 10, 1863.

Thompson, Ignatius D., assistant surgeon, June 2, 1863, in hospital at Lynchburg, Va.

Thornhill, George W., surgeon, July 1, 1861, 11th Virginia Infantry, and in hospital at Lynchburg, Va.

Thornley, James, assistant surgeon, September 2, 1861, in hospitals at Charlottesville, Richmond and Culpeper Court House, Va., and Wilmington, N. C.

Thurman, William Pleasant, assistant surgeon, June 1, 1864, in hospital at Dalton, Ga.

Timms, Charles W., assistant surgeon, June 15, 1863, 8th Virginia Cavalry.

Tinsley, Alex., assistant surgeon, January 28, 1865, 16th Virginia Infantry, 6th Virginia Infantry, and in hospital at Richmond and Williamsburg, Va.

Tompkins, F. O., assistant surgeon, July 19, 1862 (not known); resigned November 6, 1862.

Trent, Peterfield, surgeon (not found), 2d Virginia State Reserves, and in hospital at Richmond, Va.

Trevillian, John G., assistant surgeon and surgeon, October 15, 1861, 38th Virginia Infantry, and in hospitals at Winchester and Warrenton, Va.: promoted to surgeon January 26, 1863.

Triplett, William H., assistant surgeon, ——, 1861, 10th Virginia Infantry, 2d Virginia Infantry, 8th Louisiana Infantry, and 7th Louisiana Infantry.

Tucker, B. St. George, assistant surgeon and surgeon, July 17, 1861, 41st Virginia Infantry, 10th Florida Infantry, and in hospital at Lynchburg, Va.; promoted to surgeon September 21, 1864.

Tucker, David H., surgeon, July 19, 1861, in hospital at Richmond, Va.

Turner, George K., assistant surgeon, August 16, 1862, in hospitals at Kingston, N. C., and Lynchburg, Va.

Turner, William Mason, assistant surgeon, July 19, 1861, in navy, on steamer Chicora, and assistant medical director, Norfolk, Va.; resigned May 6, 1862.

Tyler, Tazewell, assistant surgeon and surgeon, April 26, 1862, 19th Battalion, Virginia Heavy Artillery, 13th South Carolina Infantry, 18th North Carolina Infantry, and in hospitals at Richmond, Va.; promoted to surgeon January 26, 1863.

Upshaw, William J., assistant surgeon, June 1, 1864, in hospitals at Richmond, Strasburg, Gordonsville and Winchester, Va.

Upshur, Thomas H. W., assistant surgeon, November 13, 1861, 3d Virginia Infantry, 19th North Carolina Troops, and in hospital at Richmond, Va.

Upshur, William G., assistant surgeon, April 30, 1862, in hospital at Gordonsville, Va.

Urquhart, Thomas H., surgeon, September 20, 1861, 6th Virginia Infantry, and 9th Virginia Infantry.

Vaiden, Joseph C., assistant surgeon, April 4, 1863, in hospital at Richmond, Va.

Vaughan, William R., assistant surgeon and surgeon, July 4, 1861, 16th Virginia Infantry, and in hospital at Petersburg, Va.; promoted to surgeon August 9, 1861; resigned July 25, 1864.

Waddell, J. Alex., surgeon, July 19, 1861, in hospital at Staunton, Va.; resigned May 24, 1862.

Waddell, Livingston, surgeon, September 11, 1861, 52d Virginia Infantry, and in hospitals at Staunton, Harrisonburg and Mt. Crawford, Va.

Wade, David, surgeon, June 13, 1863, 54th Virginia Infantry, 27th Battalion, Virginia Cavalry, and Trigg's Battalion, P. R.; resigned February 17 1864.

Wager, E. Lee, assistant surgeon, November 3, 1864, 44th Battalion, Virginia Infantry, and in hospital at Richmond, Va.

Walke, Francis A., assistant surgeon and surgeon, November 13, 1861, 46th Virginia Infantry; promoted to surgeon June 12, 1863.

Walke, John Wistar, surgeon, March 11, 1863, 20th Virginia Infantry, and in hospital at Petersburg, Va.; resigned December 7, 1863.

Walker, Charles W., assistant surgeon, April 17, 1862, 32d Virginia Infantry, and in hospitals at Hanover Court House, Orange Court House, Gordonsville and Lynchburg, Va.

Walker, Francis, assistant surgeon, June 13, 1863, 41st Virginia Infantry.

Walker, Harrison, assistant surgeon (not found), 16th Virginia Cavalry; resigned June 3, 1864.

Walker, William T., surgeon, July 19, 1861, in hospital at Huguenot Springs, Va.

Walker, Zachariah I., assistant surgeon (not found), 17th Virginia Cavalry.

Wall, Asa, assistant surgeon and surgeon, May 24, 1861, in hospitals at Mt. Jackson, Manassas and Harper's Ferry, Va.

Wallace, William, assistant surgeon, August 16, 1862, 31st Battalion, Artillery.

Walton, Richard P., surgeon, July 1, 1861, 18th Virginia Infantry, and in hospital at Farmville, Va.

Ward, John, surgeon, April 20, 1861, in navy; resigned December 5, 1862.

Ward, John, surgeon, June 13, 1863, in hospitals at Danville and Mt. Jackson, Va.

Ward, John R., assistant surgeon and surgeon, November 2, 1861, 11th Virginia Infantry; promoted to surgeon June 22, 1863.

Ward, Thomas B., assistant surgeon and surgeon, July 19, 1861, 6th Virginia Infantry; promoted to surgeon November 7, 1862.

Ware, C. A., assistant surgeon (not found), McClanahan's Battery, Lomax Horse Artillery, Virginia.

Washington, H. W. M., surgeon, June 18, 1861, in navy, on steamer Missouri, and on steamer Chattahoochee.

Washington, Walker, surgeon, July 10, 1863, 3d North Carolina Infantry, 15th Louisiana Infantry, and in hospital at Dublin, Va.; resigned November 20, 1863.

Washington, W. A., assistant surgeon, June 10, 1863, in hospital at Richmond, Va.

Watkins, Joseph F., surgeon, July 19, 1861, 36th Virginia Infantry.

Watson, David S., surgeon, July 19, 1861, 4th Virginia Cavalry, and in hospitals at Richmond, Va., and Wilmington, N. C.; resigned April 27, 1864.

Watson, James C., assistant surgeon, April 30, 1862, in hospital at Richmond, Va.

Watts, E. M., assistant surgeon, July 1, 1861, 51st Georgia Infantry.

Wayt, Newton, assistant surgeon, September 13, 1861, 22d Virginia Cavalry, and in hospitals at Staunton and Danville, Va.

Webb, Amos C., surgeon, February 17, 1862, 40th Virginia Infantry; resigned November 1, 1862.

Webb, J. B., assistant surgeon, September 2, 1861, 4th Virginia Militia (declined appointment).

Weisiger, William R., surgeon, April 26, 1862, 22d Battalion, Virginia Infantry, and 2d Virginia Artillery.

Wellford, Francis P., assistant surgeon, February 2, 1864, in hospitals at Danville Va., and Marietta, Ga.

Wellford, J. S., surgeon, July 19, 1861, 41st Virginia Infantry, 9th Virginia Infantry, and in hospitals at Richmond and Lynchburg, Va.

West, Nelson G., assistant surgeon and surgeon, February 5, 1862, 1st Battalion Virginia Cavalry, 7th Georgia Infantry, 2d Georgia Infantry, and in hospitals at Warrenton and Lovingston, Va.; promoted to surgeon July 21, 1864.

Westbrook, J. L., assistant surgeon, December 4, 1862, 3d Regiment, Engineer Troops.

Wharton, John S., assistant surgeon, November 16, 1861, Cutshaw's Battalion, Virginia Artillery, and in hospitals at Richmond, Lynchburg, Petersburg and Culpeper Court House, Va.

Wheelwright, Frederick D., assistant surgeon, February 5, 1862, 9th Virginia Cavalry, and in hospitals at Richmond and Warrenton, Va.; resigned November 10, 1862.

White, Franklin J., assistant surgeon, November 16, 1861, 47th North Carolina Infantry, and in hospital at Richmond, Va.

White, George D., surgeon, November 5, 1861, 29th Virginia Infantry.

White, Isaac, assistant surgeon, September 2, 1861, 62d Virginia Mounted Infantry, 29th Virginia Infantry, 31st Virginia Infantry, and in hospital at Montgomery Springs, Va.; resigned December 6, 1861.

White, Isaiah H., assistant surgeon and surgeon, July 19, 1862, 14th Louisiana Infantry, and in hospitals at Andersonville and Macon, Ga., and Columbia, S. C.; promoted to surgeon November 2, 1862.

White, James L., surgeon, September 11, 1861, 10th Georgia Infantry, and in hospitals at Culpeper Court House, Farmville, Lovingston, White Oak and Lynchburg, Va.

White, N. W., assistant surgeon and surgeon, April 17, 1862, 27th Virginia Infantry, 29th Virginia Infantry, 2d West Virginia Militia, 26th Battalion, Virginia Infantry, and in hospital at Jerusalem, Va.; promoted to surgeon October 14, 1862; resigned May 21, 1864.

White, Silas C., surgeon, February 17, 1862, 61st Virginia Militia.

White, Thomas Wistar, assistant surgeon, November 8, 1861, 38th Virginia Infantry; dropped February 7, 1863.

Whitehead, William R., surgeon, July 4, 1861, 44th Virginia Infantry, and in hospital at Warrenton Springs, Va.

Whitten, Joseph, assistant surgeon (not found), 36th Virginia Infantry.

Wiley, Oscar, assistant surgeon and surgeon, September 28, 1861, 54th Virginia Infantry; promoted to surgeon November 17, 1862.

Wilkins, John, surgeon, September 13, 1861, 46th Virginia Infantry, and in hospital at Richmond, Va.

Williams, E. F., assistant surgeon, February 17, 1862, 58th Virginia Militia, and in hospitals at Richmond, Lynchburg, Petersburg and Danville, Va.

Williams, Ira, surgeon, February 2, 1864, in hospitals at Richmond, Va.; Dalton, Eaton, West Point, LaGrange and Griffin, Ga.

Williams, Thomas E., assistant surgeon and surgeon, February 5, 1862, 2d North Carolina Cavalry; promoted to surgeon November 3, 1864.

Williams, W., surgeon, September 2, 1861, 146th Virginia Militia.

Williams, William G., assistant surgeon, June 13, 1863, 12th Virginia Cavalry.

Williams, William J., assistant surgeon, June 1, 1864, in hospitals at Lynchburg, Warrenton and Richmond, Va.

Williams, W. L., assistant surgeon (not found), 28th Virginia Militia.

Williamson, C. H., surgeon, June 10, 1861, in navy, with naval squadron, Charleston, S. C.

Wills, Alex. Frederick, assistant surgeon, June 1, 1864, 29th Virginia Infantry, 62d Virginia Infantry, and 18th Virginia Cavalry.

Wilson, William M., surgeon, July 19, 1861, 26th Virginia Infantry.

Wilton, R. W., assistant surgeon, July 19, 1861, 36th Virginia Infantry.

Wily, John B., assistant surgeon, April 30, 1862, 20th Virginia Infantry, and in hospital at Richmond, Va.

Wingo, Christopher C., surgeon (not found), 86th Virginia Militia.

Winston, Peter, assistant surgeon, September 11, 1861, in hospitals at Lynchburg and Charlottesville, Va.

Wirt, William, surgeon, April 18, 1862, 14th Virginia Infantry; resigned July 14, 1862.

Wood, E. N., surgeon, July 1, 1861, 14th Virginia Infantry, and in hospitals at Richmond and Chaffin's Farm, Va.

Wood, John Randolph, assistant surgeon, June 1, 1864, 48th Mississippi Infantry.

Woodson, Landon A., assistant surgeon, November 13, 1861, 14th Alabama Infantry, 10th Alabama Infantry, and in hospitals at Richmond and Staunton, Va.; resigned January 30, 1863.

Woodville, J. Lewis, surgeon, July 1, 1861, 7th Virginia Infantry, and in hospitals at Centreville and Montgomery Springs, Va.

Woodward, Richard H., assistant surgeon, April 30, 1862, in hospitals at Staunton, Va., and Charleston, S. C.

Woodward, Richard L., assistant surgeon, April 17, 1862 (not known).

Wootton, Ed., assistant surgeon (not found), 35th Battalion Virginia Cavalry.

Worthington, Robert H., assistant surgeon, April 2, 1863, 7th Virginia Infantry, and in hospital at Smithville, N. C.

Wright, Benjamin P., assistant surgeon, July 9, 1862, 56th Virginia Infantry.

Wright, F. H., assistant surgeon, September 19, 1861, 10th Virginia Infantry.

Wyatt, R. O., assistant surgeon, September 13, 1861 (not known); resigned October 22, 1861.

Wysham, William E., surgeon, June 14, 1861, in navy, on duty at Mobile, Ala.

Young, Rawlings, surgeon, June 12, 1863, 1st Arkansas Infantry.

Young, Thomas S., assistant surgeon and surgeon, September 12, 1862, 30th Virginia Infantry; promoted to surgeon November 4, 1864.

APPENDIX III

Acts of the Virginia Assembly pertaining to Medicine, 1800 to 1900

Medical Colleges

University of Virginia

Acts of 1817-18, p. 13.	Makes an appropriation from the Literary Fund.

College of Physicians of the Valley of Virginia at Winchester

Acts of 1825-26, p. 83.	Incorporates the college and names the incorporators.
1846-47, p. 21.	Appropriates $5,000 from the Literary Fund.
1853-54, p. 28.	Authorizes the purchase of the college by the board of the Literary Fund, and gives it to the faculty in return for five annual free scholarships.

Medical Department of Hampden-Sidney College

Acts of 1843-44, p. 23.	Loans $15,000 to the school.
1844-45, p. 18.	Loans $10,000 to the school.
1849-50.	Releases the faculty from paying interest.

Medical College of Virginia

Acts of 1853-54, p. 26.	Incorporates the college, February 25, 1854. Names the first board.
1859-60, p. 104.	Appropriates $30,000 for enlarging the plant.
1865-66, p. 438.	Appropriates $1,500 to repair damage due to military occupation.
1878-79, p. 34.	Amends the act of incorporation to allow the degree of "graduate in pharmacy" to be conferred.
1897-98, p. 215.	Amends act of incorporation to allow the degree of "Doctor of dental surgery" to be conferred.

Scientific and Eclectic Medical Institute

Acts of 1846-47, p. 154.	Incorporates the institute and names the incorporators.

Hospitals

Bellevue Hospital

Acts of 1861-62, p. 137.	Incorporates the hospital and names the incorporators.

St. Francis Infirmary

Acts of 1866-67.	Changes the act of incorporation.

Lunatics

Acts of 1801-02, p. 11.	Amends previous act relating to the restraint and maintenance of lunatics and the management of their estates.
1814-15, p. 62.	Provides for a court of five examiners at Williamsburg.
1817-18, pp.89-94.	Reduces to one act all previous acts relating to lunatics.
1818-19, pp. 44-49.	Same as above.
1823-24, p. 93.	Provides for the enlargement of the hospital at Williamsburg.
1824-25, p. 30.	Provides for the establishment of a Western Lunatic Hospital.
1827-28, p. 9.	Makes further provisions concerning the Western Asylum.
Acts of 1832-33, p. 8.	Limits pay of physicians attending lunatics in jails to $100 a year.

p. 22. Makes provision for enlarging the lunatic hospitals.
1835-36, p. 9. Appropriates $6,000 for Western Asylum.
1836-37, p. 19. Amends laws regarding lunatics.
1837-38, p. 33. Appropriates $29,000 for lunatic hospitals.
1838-39, pp. 14, 15. Makes minor regulations and appropriations.
1840-41, pp. 38, 39. Changes laws relative to lunatic asylums.
1841-42, p. 16. Makes additional appropriations.
1843-44, pp. 14, 15, 16. Appropriates $75,000 for the asylums. Passes other regulations.
1844-45, p. 10. Appropriates $48,000.
1845-46, p. 18. Concerns the admission of patients.
1847-48, p. 16. Appropriates $61,000. Considers the question of negro insane.
1849-50, p. 16. Appropriates $11,500 for additional accommodations for negroes at Williamsburg.
1857-58, p. 117. Establishes a trans-Alleghany Lunatic Asylum.
1859-60, p. 105. Appropriates $100,000 towards a trans-Alleghany Asylum.
1861, p. 44. Changes the names of the asylums.
1861-62, p. 31. Provides for the care of buildings and patients now in possession of the Federal army.
1865-66, p. 209. Changes the name of the asylum at Staunton.
1869-70, p. 558. Amends the code relating to insane persons.
1870-71, pp. 166, 259. Appropriates $34,000.
1871-72, p. 117. Appropriates $20,000.
1872-73, p. 288. Appropriates $4,000.
1874, p. 23. Deals with examination of lunatics.
1875-76, p. 118. Appropriates $40,000.
1876-77, p. 38. Appoints commissioners to find a site for the colored insane asylum.
1878-79, p. 73. Authorizes condemnation of land occupied by the Central Asylum.
1881-82, p. 134. Amends code of 1873.
p. 246. Authorizes building of Central Asylum at Petersburg, cost not to exceed $100,000.
1883-84, pp. 155, 156. Amends code of 1873.
p.692. Authorizes an asylum in South Western Virginia.
1885-86, p. 113. Appropriates $135,000 to the South Western Asylum.
1887-88, p. 70. Appropriates $16,500 for the Central Asylum.
1893-94, p. 956. Amends sections 1670, 1683, and 1693 of the code.

DEAF, DUMB AND BLIND

Acts of 1832-33, p. 136. Incorporates an asylum in Staunton.
1837-38, p. 31. Establishes an asylum. Appropriates $20,000 for building and $10,000 annually for support.
1840-41, p. 37. Appropriates $6,250.
1844-45, p. 13. Appropriates $25,000 toward building.
1845-46, p. 20. Appropriates $5,000.
1846-47, p. 16. Increases annuity to $15,000.
1852-53, p. 126. Increases annuity to $20,000. Appropriates $20,000 additional for buildings.
1857-58, p. 118. Increases annuity by $5,000.
1859-60, p. 106. Increases annuity by $5,000.
1861, p. 245. Incorporates a negro asylum for the deaf, dumb and blind.

1865-66, p. 72. Appropriates $25,000 for the asylum at Staunton.
1869-70, p. 573. Increases annuity to $35,000.
1874-75, p. 175. Provides for a census of the deaf-mute and blind every three years.
1878-79, p. 203. Modifies rules governing admission.
1883-84, p. 158. Amends code of 1873 regarding appointment of visitors.
1895-96, p. 770. Concerns the reorganization of the institution.
1897-98. Names the institution the Virginia School for the Deaf and Blind.
1899-1900, p. 208. Puts the election and removal of superintendent, officers and professors in the hands of the board of visitors.

MEDICAL PRACTICE ACTS

Acts of 1883-84, p. 79. Provides for a board of medical examiners.
1885-86, p. 542. Amends the act of the preceding year, adding five homeopathic physicians to the board.
1887-88, p. 369. Amends section 4 of the Act of 1884.
1891-92, p. 107. Makes amendment in regard to application of candidates for examination.
1893-94, p. 68. Act never enforced.
p. 400. Prescribes who shall be eligible to practise medicine and surgery in the state.
1897-98, p. 927. Raises fees for applicants from $5 to $10.
1899-1900, pp. 1150, 1151. Concerns licenses to practise.

LICENSE TAXES

Acts of 1813-14, pp. 5, 10. Fixes the tax for apothecaries and physicians, and fixes penalties for practising without a license.
1814-15, pp. 7, 13, 17. Defines a physician. Increases penalties for practising without a license.
1842-43. pp. 7, 9, 10. Makes changes in tax. Permits physicians but not dentists to practise dentistry without a license.
Acts of 1843-44, p. 7. Makes further changes in the license tax.
1883-84, pp. 561, 596, 597. Makes further modifications in the tax.

MEDICAL SOCIETY OF VIRGINIA

Acts of 1823-24, p. 77. Incorporates the "old" society and names the incorporators, January 2, 1824.
1870-71, p. 32. Incorporates the "new" society and names the incorporators, January 14, 1871.

RICHMOND ACADEMY OF MEDICINE

Acts of 1865-66, p. 432. Incorporates the Academy February 8, 1866, and names the incorporators.

BOARD OF HEALTH

Acts of 1871-72, p. 71. Establishes a state board of health.
1899-1900, p. 1248. Defines the powers and duties of the state and local boards of health.

DRUGS

Acts of 1842-43, p. 59. Prescribes punishment for negroes for poisoning, attempting to poison, selling medicines, or committing abortion.
1843-44, p. 11. Concerns the tax on venders of patent and "specific medicines."

1847-48. p. 112. Makes the adulteration of drugs or foods a misdemeanor.
p. 126. Prescribes punishment for negroes selling medicines.
1870-71, p. 362. Provides for labelling of poisons.
1885-86, pp. 396, 496. Provies that morphine can be sold only if wrapped in scarlet envelopes or with a scarlet label on the bottle. Fixes fines for adulterating drugs.
1887-88, p. 83. Provides punishment for throwing dead animals into water supplies.

PURE FOOD

Acts of 1888-90, p. 63. Prevents selling unwholesome meat.

QUARANTINE

Revised Code of Virginia, 1819, v. 2, chapter 244, p. 293. Obliges foreign vessels to perform quarantine.
Acts of 1848-49, p. 81. Includes the Ohio River and its tributaries in the quarantine.
1876-77, p. 100. Constitutes the Elizabeth River a quarantine district and grants powers to the seven commissioners. Fixes pay and other regulations.
1877-78. Amends Act of 1877.
1881-82, p. 132. Cedes land to the United States for a quarantine hospital near Hampton Roads.
1885-86, p. 255. Creates a board of seven commissioners.
1897-98, p. 568. Amends Act of 1886, extending the powers of the commissioners to travelers by land.

VITAL STATISTICS

Acts of 1852-53, p. 40. Concerns the registration of births, marriages and deaths

SMALLPOX

Acts of 1813-14, pp. 43, 44. Provides for free distribution of vaccine.
Revised Code of Virginia, 1819, v. 2, chapter 243, p. 289. Consolidates several previous acts relating to inoculation and the prevention of smallpox.
Acts of 1831-32, p. 25. Amends the act of consolidation of 1819.
1849-50, p. 16. Authorizes a vaccine agent at Lewisburg as well as at Richmond.
1852-53, p. 128. Empowers justices to require physicians to examine smallpox suspects, and provides for vaccination of the poor.
1869-70 and 1871-72. Excludes children with contagious diseases from schools and makes vaccination of school children compulsory.
1872-73, p. 294. $750 appropriated annually for a vaccine agent.
1874-75, p. 137. Amends the code of 1873, prohibits inoculation except in special hospitals and the importation of variolous matter, and declares the abandonment of a smallpox patient on the shore of Virginia a felony, in case of the patient's death, a murder.
1877-78, p. 81. Relates to the salary of the vaccine agent.
1881-82, p. 169. Amends the code of 1873 to allow towns and counties to require vaccination.
1893-94, pp. 231, 971. Relates to compulsory vaccination and the exclusion of contagious diseases.

CONTAGIOUS DISEASES

Acts of 1891-92, p. 905. Regulates the transportation of bodies dead of contagious or infectious diseases.

1899-1900, p. 408. Amends the act relating to the transportation of bodies dead of infectious diseases.

AUTOPSIES

Acts of 1847-48, p. 137. Empowers the coroner or justice to require a physician to perform an autopsy at inquests.

Acts of 1883-84, p. 61. Provides for distribution of dead bodies to professors of anatomy.

MEDICAL DEPARTMENT, C. S. A.

Acts of 1861, p. 11. Provides for the establishment of the Virginia Navy with its medical department.

p. 13. Provides for the organization of a medical department for the military forces of the state.

p. 25. Makes regulations regarding the medical department.

PHARMACY

Acts of 1885-86, p. 405. Incorporates the Virginia Pharmaceutical Association, regulates the practice of pharmacy and the sale of poisons, and sets up a board of pharmacy.

Acts of 1893-94, p. 715. Amends the previous act concerning pharmacy.

DENTISTRY

Acts of 1844-45, p. 109. Incorporates the Virginia Society of Surgeon Dentists and names the incorporators.

1885-86, p. 235. Regulates the practice of dentistry. Sets up a board of examiners.

1889-90, part 1, p. 24. Amends code of 1887 relating to the practice of dentistry.
part 2, p. 61. Charters the Virginia State Dental Association.

1893-94, p. 593. Amends the Act of 1890 relating to the practice of dentistry.

1897-98, p. 490. Amends the Act of 1890. Prescribes who shall practise dentistry.

NURSES

Acts of 1872-73, p. 342. Authorizes the board of supervisors of counties to appoint and regulate the compensation of physicians and nurses for the poor.

DAVID M. WRIGHT

Acts of 1863-64, p. 85. Records resolutions relating to the death of Dr. David M. Wright in the city of Norfolk.

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ERRATA:

p. 97. *J. S. Irvine* should be *J. S. Irvin.*
p. 142. *James S. Irving* should be *James S. Irvin.*
p. 318. Date of quotation from Beaumont's diary should be *1813*. The "Yorktown" referred to was near Niagara, *not* in Virginia.

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