History of medicine : A brief outline of medical history and sects of physicians, from the earliest historic period; with an extended account of the new schools of the healing art in the nineteenth century, and especially a history of the American eclectic practice of medicine, never before published.

Contributors

Wilder, Alexander, 1823-1908.
University of Toronto

Publication/Creation

New Sharon, Me. : New England Eclectic Pu. Co., 1901.

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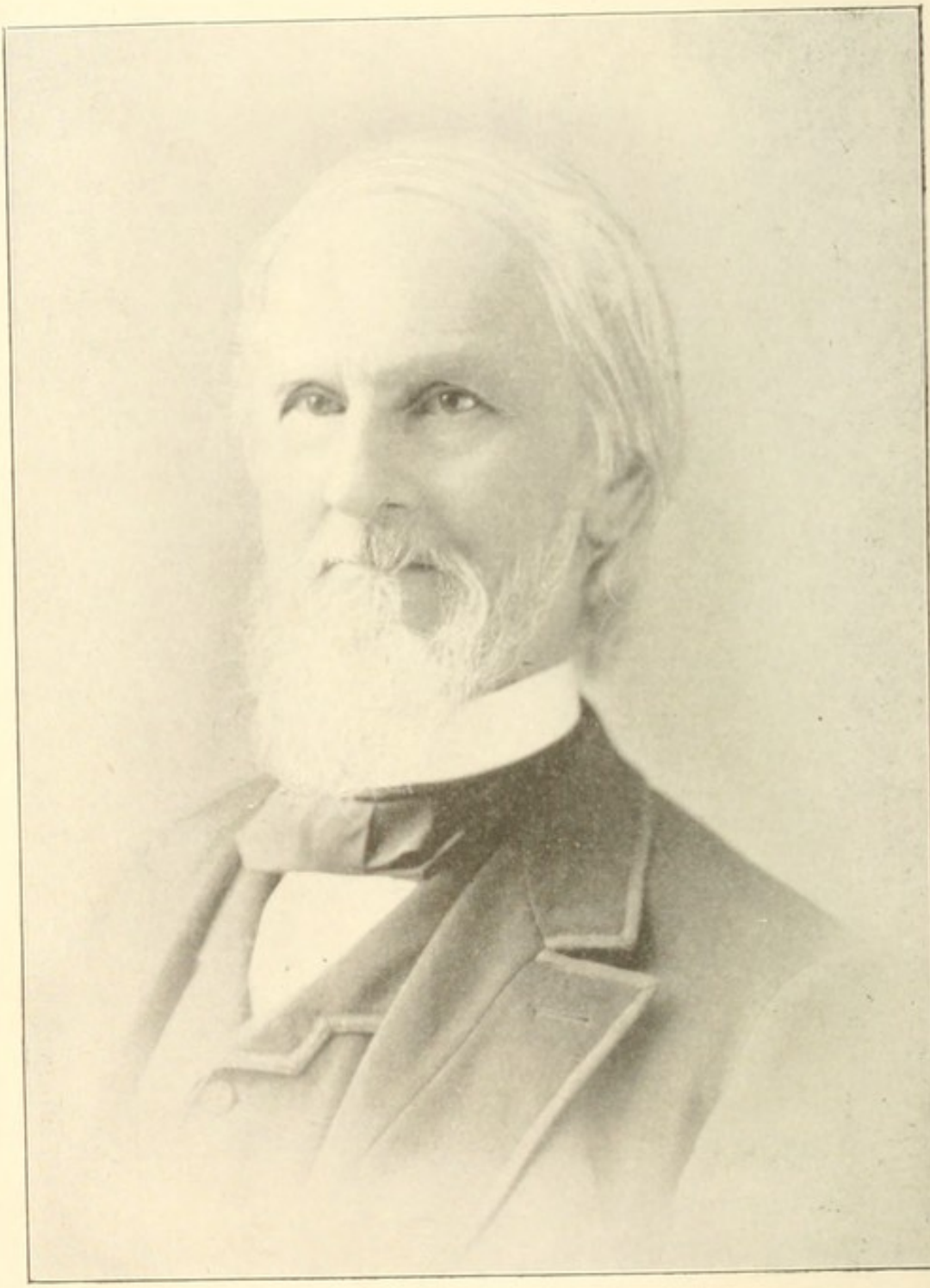

Alexander Wilder

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HISTORY OF MEDICINE.

A BRIEF OUTLINE OF MEDICAL HISTORY AND SECTS OF PHYSICIANS, FROM THE EARLIEST HISTORIC PERIOD; WITH

AN EXTENDED ACCOUNT OF THE NEW SCHOOLS OF THE HEALING ART IN THE NINETEENTH CENTURY,

And Especially a History of the American Eclectic Practice of Medicine, never before Published.

BY ALEXANDER WILDER, M. D.,

Honorary Member of the Liverpool (Eng.) Anthropological Society, Vice-President of the "American Akademe," late Professor of Physiology and Psychological Science and Secretary of the National Eclectic Medical Association of the United States, Member of the New York Medico-Legal Society, President of the "School of Philosophy" and Member of other Philosophic, Reformatory and Scientific Societies, etc. etc.

There are one-story men, two-story men and three-story men. Fact-collectors are one-story men. Two-story men reason about facts. Three-story men are those who are described as inspired men.

OLIVER WENDELL HOLMES.

THIRD THOUSAND.

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FOREWORDS.

A history as a record of events should be faithful, impartial and, so far as may be, unimpassioned. There should be neither inordinate praise of individuals, nor any unwarrantable degree of blame. The writer is the servant of the reader, and discharges the obligation by candid utterance and a tenacious adherence to actual fact. It is no person's prerogative to judge the motives of another, but the attention belongs strictly to acts and their tendencies. Indeed, it is generally, and perhaps always true, that if we knew others well, we would find less occasion for blaming them.

Such has been the sentiment of the compiler in preparing this work. While his convictions are positive and without disguise in relation to specific acts and measures when these were directed against personal rights and public welfare, he has been desirous even to eagerness to conform to the law of charity and to recognize whatever was worthy and laudable in individuals. If he is in any just sense to be considered as partisan, it has been in respect to policies and particular propositions, rather than toward the persons bringing them forward, or supporting them.

It had never been a project contemplated by him to undertake a work of this character. Though from early manhood familiar with the Reform Schools of Medicine and indoctrinated into their leading principles, he had always regarded other individuals whom it would be easy to name, as fitter for the undertaking. There had been propagandism, conflict and controversies in which he had taken no part, and from which

he had carefully held aloof. Besides, it might have been better that such a work had been performed while the men were living who could have enriched it with their remembrances of what they had witnessed, and in which they had taken part. It would thus have been completer, and more interesting to the reader. But he was summoned to the undertaking unexpectedly by an official request from the medical organization to which he belonged. On the nineteenth day of June, 1890, at its annual meeting at Niagara Falls, the following resolution was adopted :

"*Resolved*, That Dr. Alexander Wilder be and is hereby requested to prepare a History of Medical Reform during the earlier periods, under the authority and with the sanction of the National Eclectic Medical Association."

The endeavor has been diligently made to comply with the tenor of the instructions herein given. There has been no labor spared nor proper expenditure avoided in order to procure information. We had no personal interest to subserve, nor selfish motive to gratify, other than the rendering of faithful service to a cause. The evolution of the American School of Medicine required patient study and contemplation, as well as careful narration of occurences. It must be traced to its origins and identified in its affiliations. Critical judgment was necessary to determine what to include as essential, and to sift out what was superfluous. It was an obligation likewise, that the men who gave the cause its inception, whose efforts and sacrifices had effected its achievements and successes, and prepared the field for those coming after them to reap the harvest, should receive the meed of honor which they richly deserve. "They are swine," says the Turkish proverb, "who look not up to him who beateth down the acorns."

It may not be amiss to remark here that we found at the outset curious misapprehensions of the scope and object of this work. Several correspondents furnished descriptions of individual misconduct, and others seemed to suppose that personal biographies were to constitute the principal subject-matter. It would certainly have been gratifying to give sketches of individuals showing that they and their achievements were appreciated; but this would be a stepping aside from the general purpose of a history as outlined in the resolution which has been quoted. As for the reciting of individual wrong-doing, especially when it was connected with matters having little connection with the direct object, the impropriety is manifest. A historian should have no personal griefs to display, or injuries to punish. He may properly do no more than is suggested in these words of Othello in the tragedy:

> "When you shall these unlucky deeds relate,
> Speak of me as I am: nothing extenuate
> Nor set down aught in malice."

It was considered advisable to give an outline of Medical History of earlier periods. We can not possess an intelligent view of the Healing Art, beyond the mercenary aims of the craftsman, except we have a fair conception of its career and achievements in the Past. Ignorance and want of appreciation in such respects would be a barbarism. We would that no one of those with whom we have been affiliated should speak or write concerning those that have lived in former periods after a manner that exhibits a lack of accurate knowing; and it will be gratifying if we shall have contributed somewhat toward the remedying of the infirmity.

It is sometimes objected that a new School of Med

icine is an unnecessary innovation, that it is the introducing of a sect or faction where there ought to be harmony, and that it must necessarily be of ephemeral duration. Whether this judgment is correct the reader and a candid public must decide. Men do not put new wine into old wine-skins, lest it perish. The history of medicine from Hippokrates and Galen till the present time has been replete with innovations, new teachers, new schools, new procedures. There has been no one school, no single medical profession, outside of the priesthoods, extending in an unbroken chain from the indefinite Past to our own Twentieth Century. New phases have manifested themselves as regularly almost as those of the moon in the sky. We may not be astonished at Paracelsus for burning the writings of Galen as no longer suitable for the student of the Healing Art. A distinguished physician of Edinburg upon taking charge of the Library of the University, commanded all books of reference that were ten years old to be removed as obsolete. If any would conjure with old names, like Galen, Rhasis, Ibn Sina, or later ones that have been distinguished, the fact is nevertheless unquestionable, that they have had their time. We may profit by their counsel and examples, but we can not be bound to employ their formulas and procedures.

Even now, with all the boasted learning of our Modern Time, the diversities of opinion in medical circles are innumerable. There are sects and schools of practice, even where there exists arbitrary authority and sentiment to prevent organizing into distinct forms. A one Catholic science of Medicine, of inerrant orthodoxy and faultlessly classified, cannot be intelligently affirmed to exist. The medical vista is like a kaleidoscope in which the several dominant opinions

appear conspicuous according as the instrument happens to be turned. "I have seen them," says the late President Jefferson, "the disciples of Hoffmann, Boerhaave, Stahl, Cullen and Brown, succeed one another like the shifting figures of a magic lantern; and their fancies, like the dresses of the annual doll-babies from Paris, becoming from their novelty, the vogue of the day, and yielding to the next novelty, their ephemeral favors." Sentiments that are often scouted as vagary and of revolutionary character, have the sanction of men standing high in the medical profession. Yet the conservatism of established bodies of men is so great as to induce resistance, even to ferocious violence, to changes deserving of a welcome. New views are generally first denounced as false, afterward derided as of little importance, and eventually accepted with the assertion that they had always been the property of the profession. The first promulgators, however, are seldom included in such favorable reception.

Yet it must be acknowledged that the professional instruction which has been systematically imparted in the various institutions of medical learning has not satisfied the prevalent unrest in public sentiment. Able practitioners have often commented upon its insufficiency. One physician whom we knew counselled his student to attend the medical college where the degree would be easiest to obtain; declaring that this was perfunctory, and that the real professional knowledge would remain to be acquired afterward. Sir Thomas Watson was more outspoken, averring that the physician must begin by unlearning what he had learned in the laboratory. With such convictions on the part of teachers themselves, it may be expected that intelligent persons will look beyond for a knowi-

edge that is genuine and trustworthy. The statement of a medical journal may not surprise us that at the present time there are twice as many students taking lessons in mind-cure and kindred theories, than are to be found in all the medical colleges. We do not care to join in aspersing them as visionaries, when accepted religious authority appears to sustain them, and especially when eminent members of the medical profession give sanction to their assumptions. Hufeland says unreservedly: "There is a region of the man that is never sick; and to call out the reign of that region makes the sick man well."

Mr. Jefferson, looking into the future, himself foreshadowed a new Practice of Medicine which should come into existence in our Western Hemisphere. "I hope and believe," said he, "that it is from this side of the Atlantic that Europe, which has taught so many other things, will be led into sound principles in this branch of Science, the most important of all, being that to which we commit the care of health and life."

It was necessary likewise, that political independence should be accompanied by medical as well as religious enfranchisement. Enlightenment comes with freedom, and Benjamin Rush, himself a signer of the Declaration of Independence, insisted that the provisions of that instrument should be extended to the medical calling. He declared his hostility without equivocation, to an exclusive and privileged body of practitioners, and affirmed without any mental reservation that physicians, in order to be successful must emancipate themselves from the tyranny of the existing Schools of Medicine. Sir John Forbes, physician to the late Prince Consort specified the direction of the coming movement, "In the present state of our

knowledge," says he, "the Hygienic—Eclectic—Hippocratic—Rational System of curing diseases is the only one that can be justified or safely followed."

The new movement of which the present American Eclectic School of Medicine is the outcome, it will be seen, was called into existence by the exigency. Its aim was to realize the wants of the times and to employ intelligently the means for satisfying them. It encountered much opposition like preceding attempts at reformation in different spheres of activity. There was a conflict as is related, which lasted for years, and there were gained by it the constitutional rights to which the citizens are considered to be entitled. Yet there remain further advances to be made that are of vital importance. Equal opportunity and impartial justice are unconditional where real freedom exists. There has existed a purpose to smother the Eclectic School by strict silence in relation to its practitioners, and by a studied ignoring of its existence. Even the compilers of the Encyclopædias, with one honorable exception, have pandered to this object, by excluding any full or even just account of the School, its essential doctrines and literature. These things indicate what is essential to its future career. A foothold should be gained in the open arena among the scientists and master spirits of the time. The principles upon which it was founded, should be tenaciously and strenuously maintained, while a generous hospitality should be extended to every new thought or discovery that may serve to extend our knowledge or to be of actual utility.

Only great and worthy things have any permanent and absolute existence. A School of Medicine will exist as long as it really deserves to exist. In Medi-

cine as in the higher ethics he only is great who serves: the greatest among us all is the servant of all. As physicians we are not craftsmen and mechanicals following a calling for the mere pecuniary emolument, nor are we a combination of medical practitioners with personal ends to advance at the hazard of every pledge to the public and of honest principle. It was a criticism of Francis Bacon that "Medicine was a science more professed than labored, and yet more labored than advanced—the labor having been more in a circle than in progression."

It devolves upon us to redeem it from that imputatation. Every man is a debtor to his profession, and may redeem the obligation by adding to its acquirements, and by exalting its character and reputation.

It is in the province of every one, it is accordant with the genius of Eclecticism in Medicine, and it has been repeatedly avowed and pledged, to make every effort to carry forward the medical art to greater accuracy and perfection. The taint of selfishness enfeebles noble exertion, and dishonors every motive. It causes the individual to lag behind, whenever he aims only or chiefly to secure personal profit. Nor is it innocent to place obstructions in the way of others. Our course is obvious: to cherish an invincible faith in the good and the true, to seek for knowledge as the most precious of treasures, to maintain our purpose resolutely and persistently.

In this way can be established the right to the front rank in the profession of healing, as well as to realize the highest ideal of the physician, a priest of Nature and interpreter of her holiest Mysteries.

ALEXANDER WILDER.

Newark, N. J., September 19, 1900.

POSTSCRIPT.

Grateful acknowledgment is rendered to the persons who have, by courtesy and good offices, given assistance in the preparing of this work. Some supplied books and periodicals abounding with valuable facts, and others took additional pains in preparing statements. Among them may be enumerated, Messrs. Law and Boyd, of New York, Doctors James Anton, John R. Borland, Harvey E. Bowles, John C. Butcher, Marshall Calkins, Joseph R. Duncan, William M. Durham, Robert A. Gunn, Wm. Collins Hatch, William Hargreaves, Wm. H. Hawley, Henry Hollembaek, William Jones, John King, Richard E. Kunzé, William S. Latta, John Uri Lloyd, Noah R. Martin, Albert Merrell, C. Edwin Miles, S. B. Munn, William Paine, Henry B. Piper, George E. Potter, John S. Prettyman, John W. Pruitt, John K. Scudder, John Simmons, Thomas Simmons, Herbert T. Webster, J. Milton Welch, A. B. Whitney, A. B. Woodward. Their kind services did much to lighten a task which was truly formidable, and will always be remembered accordingly.

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HISTORY OF MEDICINE.

CHAPTER I.

ARCHAIC MEDICINE.

CARLYLE has said: "The profession of the human healer is radically a sacred one, and connected with the higher priesthood; or rather, is itself the outcome and acme of all priesthoods, and divinest conquests of the human intellect here below—as will appear one day."

We may not wonder, then, that the earlier Faiths of the world which ascribed the origin of mankind to Divinity, also associated the technique of medicine with the offices of religious worship. They named gods as the first physicians; these famous hero-chieftains, gifted men who were instinct with enthusiastic fervor, the Rephaim and giant-minds among the tribes and peoples of the earth. The temples were often hospitals to which the sick resorted for counsel and healing medicines, believing that the means of cure had been revealed there by the guardian divinity of the shrine. The priests were regarded as physicians for disorders of the body; prophets and diviners were consulted for those who suffered from disease, and the wisdom of the philosophers included the knowledge of

treating physical maladies. Even in later periods, every supposed advance in spiritual ken has been accompanied by the persuasion of superior acumen in regard to the ailments of the body. Pythagoras, Aristotle, Athenæos, the early Christian teachers, the mystics of later centuries, down to our own times, not only gave instructions to their disciples in arcane, metaphysical and other learning, but also treated the sick and ministered to their bodily injuries.

Indeed, we may regard it as an axiom, that the knowledge which is anywhere possessed of the art of healing, is the measure of the refinement and civilization to which the people have attained. Man is civilized by virtue of social relations ; and refinement is the becoming divested from grossness, vulgarity, and the evil manners which are characteristic and incident to a living for one's self alone. Selfishness is savagery ; and a state of society in which self-interest is the ruling element is hardly yet reclaimed from the state of barbarism. It is of little avail to appeal to skill in mechanics, engineering, and other attainments in the plane of material evolution. These are not adequate proof of spiritual advancement. Kindly sentiment toward others, sincere regard for their welfare, charity in will and act, make the only real culture and civilization. The art and technique of healing proceed from these qualities, and cannot flourish apart from them.

It is the province of intelligence, as distinguished from scientific knowledge and artistic skill, to investigate causes and origins. Our thought is thus set free from the narrow limits between the cradle and the grave. We become broader, wiser, purer and better for having learned of what has been. There is likewise a firmer basis for faith and ambition in regard to

the future, a more accurate knowing; and the individual is thereby liberalized, refined and ennobled. By such eating of the Tree of Knowledge, the eyes become open, and the man is as a god. He makes "the divinest conquest of the human intellect."

The History of the Healing Art is as old as the history of the human race. The amber of antiquity has not preserved the name or any monument of the benefactor who first ventured upon the attempt to relieve the maladies of his fellow-beings. To know so much would be equivalent to knowing the origins of civilization, when perhaps they were only germs of which the future could not be readily foreshadowed. What is regarded as learning, erudition, or wisdom, is a treasure which others have won and possessed before us. Every great thought has had a precursor, every great man a predecessor. "What has been is what again will be," says the Hebrew sage; "what has been done is the same as what will be done; there is nothing new under the sun." We have no Father of Medicine, no Founder of the Healing Art, except in eponym.

Indeed, upon all questions involving this matter, men of learning in modern times are widely divided. One school inculcates the hypothesis that the human race from the first was capable, by virtue of direct endowment from Divinity, of all manner of intellectual and artistic achievement; another party maintains the contrary sentiment, that all culture has been a matter of slow and gradual development—man having an origin in a low and bestial condition, and beginning as in the case of each individual, with a long infancy, childhood and adolescence, which for untold periods gave little promise of the eventful maturing of a being "a little less than gods, crowned with glory

and honor, and having dominion over all created things." We have no occasion to give an opinion in the matter. So far as we know, the world has never been wholly civilized or wholly savage, but every region in its turn has enjoyed a higher cultivation, preceded and often followed by a period of barbarism. There is good reason, therefore, for the supposition that such cycles of alternate savagery and civilization will continue till the earth shall become unfit, if such a crisis can ever arise, for the sustaining of human inhabitants. The germs of such changes are found in every country and social condition.

Every country having a literature of ancient periods of its history possesses some account of a healing art. Egypt, India and China, perhaps the most venerable for antiquity, each had a caste of physicians included in the sacerdotal order. The Skythic peoples, likewise, who probably were older than these, abounded with traditions of an ancient lore which embraced the art of divining, the treating of disease, and religious worship. We have no alternative, therefore, except to take such relics and statements as remains, leaving the question of origin with other problems of archaic time.

By a significant unanimity, the serpent upon the staff has been generally accepted as the symbol of the medical art. Egyptians, Greeks, Germans, South American Indians and North Americans, employed it alike. The asp on the crown of Queen Isis, the Fire-Serpent on the sign-post of Assyrian physicians, the rattlesnake hieroglyphic of Mexico and Brazil, and the ophidian upon the Magic Staff of Apollô, Æsculapius and Hippokratés, all meant the same thing. The serpent was the signifier of the occult life principle, and of that knowledge of it which rendered the possessor

as a divine or preternaturally endowed being. Even the brazen seraph coiled upon a pole or staff and set up by Moses in the wilderness, we are told, possessed such power, that any one about to die, when he beheld it, recovered from his extreme peril.

While the serpent was thus arcanely symbolic, the staff was also part of the ancient physician's armamentarium. The direction of the Israelitish prophet-abbot to his servant was a meaning one: "Take my staff in thine hand and go thy way; if thou meet any man, salute him not, and if any salute thee, answer him not again; and lay my staff upon the face of the child." (*Kings* II. or IV., iv., 29.) Klearkhos relates the account of a mantis, who, in the presence of Aristotle, by the means of a wand, produced a cataleptic condition, and afterward restored the patient to normal consciousness. Examples are abundant of similar notions; the sceptre of the king was believed to possess magic virtue; the batôn of the magistrate, the rod of the prophet, and the barsom or thyrsus of the divinity, pertain alike to the same category. A physician without his staff would have been regarded in ancient time like his fellow, the enchanter, without his wand. The fitness of the symbol of health or "sign of salvation," is therefore abundantly shown. The serpent upon the rod as significative of healing virtue, very justly has been accepted by the medical profession of both hemispheres. The story of the book of *Genesis* was by no means out of place when it described the animal as ministrant at the Tree in the Garden.

EGYPT.

According to Pliny the origin of Medicine as an art and pursuit, was Egyptian. Others, however, have pro-

fessed to trace it to Arabia, crediting it, after the mythologic form of personification, to Arabos, the son of Bel and Babylonia. This was a figurative way of declaring the Chaldæans the inventors of the Art of Healing. So long, however, as the relative antiquity of the several countries has not been conclusively determined, we have no occasion to give preference to any of them. The preëminence of the physicians of Egypt justifies us in noticing them first. That there was a literature in the archaic land of Ham is unequivocal. The "oldest scripture," the *Papyrus Prisse*, was written upon the erased pages of an earlier work. We are told that before Mena or Mênes, who indeed seems to have been a military and probably a foreign conqueror, the gods ruled in Egypt. In other words, the sheiks or priestly heads of the tribes and families were supreme. At that early time there had begun a Bardic period; and proverbs, legends and songs were common in all the country of the Nile. Whether the reputed founder of the first Monarchy was an actual person is by no means certain. His name is the same as that of the Sacred Bull at the city of On, and he is recorded as having been slain by a crocodile or hippopotamus—the Typhôn or Satan of Egypt. He was succeeded, it is said, by his son Athôth, or Atuti, who is described as a cultured monarch. "Men have books written by him on Anatomy," says Manethô; "for he was a physician." In the Third Dynasty was a king named Ser, or Tosorthros, whom Sir J. Gardner Wilkinson considers as the same personage. He was also called Emeph, or Imhotep, the Egyptian Æsculapius, Manethô declares, "because of his medical knowledge;" adding, "he was the first who built with hewn stone, and he was also a great patron of learning." All these arts had been exercised

under his predecessors, but probably his age was marked by their higher development. Foreign elements were now infused into the national character; a new religion, a new public policy, and a new literature introduced.

The pantheon was remodelled, and the divinities known in the later Egypt were now worshipped. Isis, the Great Mother and Madonna, was the goddess of the secret shrine, and bore the Semitic name of Hakhamoth or Wisdom, as being the tutelar genius of the Superior Knowledge and patroness of the art of healing. Ptah, the oldest divinity known in Egypt, was the personified ætherial fire that imparts life to everything. Serapis in the later centuries was also a god of life and healing, and the famous Museum at Alexandria was his sanctuary. On the walls of the ruined temples of Amen at Thebes were basso-relievos displaying surgical operations and instruments not very unlike some in use in modern times.

The god Thôth or Hermes, (the "very great one") was the tutelary of all sacred and sacerdotal learning. Six of the "Books" inscribed to him were devoted to medicine and surgery, and contained some hundred and fifty prescriptions and modes of treatment. One chapter of eight pages was devoted to the optic nerve and diseases of the eyes, which are still very common in Egypt. The various treatises were set forth as special revelations from the divinity, and the prescriptions are accompanied by sentences and invocations for the physician to repeat while making up the medicine, and when about to administer it to the patient. The remedies are given for the various external and internal diseases of the body, and the numbers regarding the weights and measures are prescribed for each

drug. While the favor of the god was duly invoked, the learned writers were careful to guard against any evil result from reckless or improper dosing.

During the reign of Kheops or Sufi, who likewise was a patron of learning, there was found in a sacred niche of the goddess Mut, a formula for the treatment of wounds. It was perceived in the moonlight by a ministrant of the shrine and brought to the king as a precious discovery. In another papyrus now preserved in the Museum at Berlin is a recipe for the use of the drug *uchedu*. It had been found at Letopolis in the reign of the king Hesep or Husapati (Joseph) of the First Dynasty, and brought after his death to king Senada of the dynasty next succeeding.

In course of time experience taught them the use of many new remedies, and we learn from some of the mummies found in the necropolis of Thebes that they had the art of plugging teeth with gold. "The bounteous land produces very many drugs," says Homer; "many of them are excellent when combined, and many are deadly; and each physician possesses knowledge above all men, for indeed, they are of the race of Päieôn." They were carefully instructed. The servile and subject classes were regarded as earth-born and inferior, but the youth of superior rank were considered as of diviner mould. The temples were schools of learning in which they were taught in the various branches of knowledge. At On and Memphis were universities surpassing all the others.

After the expulsion of the Shepherds the monarchs of the New Empire restored the temples to their former importance. Upon the establishment of the Nineteenth Dynasty, Seti, the conqueror, resolved to establish an Akadêmeia at Thebes which should equal the

priestly seminaries of Lower Egypt. The new sanctuary of learning was placed in the Necropolis, on the western side of the River Nile. Such a site was regarded as perfectly suitable for the schools and dwellings of religious teachers, and instructors in science. The cheerful theosophy of the Egyptians allowed no gloomy conceptions to cast a shadow over life in the city of the dead. The "House of Seti" was the largest of all the sanctuaries except the one which the great Thôthmes had built; and in it were celebrated both the services for the dead of the royal household, and the arcane and initiatory rites of the gods of the mysterious West. Great sums were expended for its establishment, for the maintenance of its priests and inmates, and for the support of the several institutions which it comprised. One of these was a department for instruction. Here priests, physicians, astronomers and students in other branches of learning were taught by professors excelling in erudition; and when they had attained their senior degree they were admitted to the dignity of "scribes of the temple," or *hierogrammateis* and entitled henceforth to maintenance from the royal treasury. They were thus enabled to prosecute their studies and researches free of care, and with every necessary facility. There was also an extensive library to which they had free access; and a paper factory connected with the temple furnished the papyrus necessary for adding to the immense collection. Every thing that would afford encouragement to learning seems to have been abundantly supplied.

The sons of the other classes were by no means excluded from participation in these advantages. They might obtain admission to the schools of learning, and were even permitted to enter the sacerdotal body.

The physicians of Egypt belonged to the sacerdotal order, to the class denominated *pastiphori*, or carriers of the sacred shrine and emblems. Their canons required them to follow prescribed courses of treatment, but they were permitted, under certain regulations, to adopt different methods and remedies, taking the responsibility for consequences. Deriving their support from the lands of the priests, and payments from the royal treasury, they received no fee or honorarium from patients. Whatever payment was made in acknowledgment or recompense for their services, belonged to the temple with which they were connected. They were obliged to attend the poor, and to go on foreign journeys as well as military service, without remuneration. Every temple had its staff of medical practitioners, and whoever required the services of a physician sent thither for him, with a statement of the complaint from which the sick man was suffering. The principal of the medical staff selected the one whom he supposed to be best suited for the case.

Superior as the knowledge of these priest-physicians was regarded, and arbitrary as was the kingly authority of those times, there is no evidence that any restriction was placed upon practitioners who had not conformed to the prescribed regulations. Indeed, the imposing of such disability and curtailing of the rights and liberties of others, is always indubitable evidence of a low moral and social condition. Knowledge is power, as we have all been assured, and the person possessing it is therefore better equipped than others for the conflicts and experiences of life. A prohibition to compete in a profession for its honors and emoluments, on the pretext of inferior instruction, or the employment of the boycott to crush an honorable rival, is equivalent to

the taking for granted that knowledge produces mental and moral feebleness—or rather, it is a confession that that for which protection is sought is something else than knowledge. There can hardly be any profound conviction of right in the matter.

Hence, although in ancient Egypt the physicians of the privileged class were carefully instructed, and provision was made for the bestowing of their services upon the poor as well as the rich, there was little impediment to the employing of other practitioners. Indeed, empirics and pretenders were as common as in more modern times; clairvoyants and "mediums" practiced as such; charms and amulets were employed, and pieces of papyrus have been found with written sentences upon them, which had been used for magic purposes. The belief has been current in all ages that hieroglyphics, runes, astronomic, and even alphabetic characters possessed an occult virtue and might be employed with benefit for bodily ills.

Without doubt the prophets of the temples themselves cherished faith in certain modes of obtaining superior knowledge, which in modern times would hardly be acceptable. Like the rest of humankind they believed in there being actual communication with Divinity, and that most salutary physical results might thereby be obtained. Sculptures upon the walls of the temples indicate them to have been familiar with the practice phenomena of Animal Magnetism, particularly with the sacred hypnotism. The hand, and especially the forefinger or *index medicus*, are common in symbolic representation, and imply that they were employed to impart healing virtue. The words of the Syrian general, Naaman, show the generality of the practice among prophet-physicians. "Behold," says

he, "I said to myself, 'He will surely come out to me, and stand, and call upon the name of his God, and extend his hand over the place, and heal the plague.'"

Indeed, the term surgery or *kheirourgike* signifies manipulation, and appears to have been originally employed in that sense. Yet the Egyptian physicians were not without skill in surgical operations. They inserted artificial teeth and plugged cavities, operated successfully for cataract, performed lithotomy both by the suprapubic and the perinæal operations, and made examinations of the bodies of the dead in order to ascertain their maladies. That they were experts in the art of bandaging, is plainly shown by the mummies, and they had some skill with fractures, though this has been doubted. The Hebrew prophet exhibits their method: "Son of man, I have broken the arm of the King of Egypt; and lo, it shall not be bound up to be healed, to put a roller to bind it, to make it strong to hold the sword." (*Ezekiel*, xxx., 21.)

Their extraordinary practice of mummification gave them a very familiar knowledge of anatomy, at least of the internal organism of the human body. Their religious belief, in which their tenacity exceeded that of other nations, led them to this custom. The body of the deceased person was regarded as a form or symbol of the god Asar or Osiris, and accordingly it was handled only by priests, the Pastiphori, The account given of the embalming of the Hebrew patriarch, Jacob, by "physicians" or *Rephaim*, who were "servants" of Joseph, seems in some particulars, not quite to agree with the practice, In the process the abdomen was opened on a line made by a scribe, and its contents carefully removed to be preserved by themselves. The skull was also emptied. The body was then

placed in natron for forty days to remove the adipose and putrescent matter; after which it was swathed in linen bandages and deposited in the sarcophagus. Spicery, precious gums and other articles, costing hundreds and even thousands of dollars, were employed for the bodies of the rich and noble; but natron, common salt and the process of smoking sufficed for corpses of the poor. Papyrus-scrolls were placed in the coffin, and often in addition, amulets, the favorite ornaments, and even playthings. The funeral rites were similar to these at the processions of the murdered divinity, Osiris. The body was ferried by a *kharun* or boatman across the Nile to the *amenti* or western bank, borne to the temple for the last offices, bewailed for forty days and then deposited in its receptacle. The mourners were professionals, consisting chiefly of the *almas* or maids of the temple, and "boys" that had been set apart to the service of the divinities.*

Indeed the Egyptian medical knowledge has been both underrated and overrated. The methods employed were the result of long observation, and were often derived from the experience of individuals not belonging to the medical caste In the periods of a waning civilization, it is a common practice to plagiarize from those whom it is desired to keep out of sight, to contradict them silently, and to assume a scientific knowledge which is not actually possessed. The medical men of the Theban Empire seem to have

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*Compare *Ecclesiastes*, xii. 5.—"For the man is departing to his house of eternity, and the mourners are going in the streets."

Also, *Gospel according to Matthew*, xi., 16, 17, (amended version). "It is like the boys sitting in the assembly and calling to their al ernates, saying: 'We played the flutes for you and you did not dance; we chanted the dirge and you did not beat your breasts.'"

done this abundantly, and at the same time to have established a code for practitioners which might not be disregarded. With it, of course, progress in knowledge was arrested, till the Shepherd-rulers swept out the rubbish, and enabled the savants of the later period to adopt a broader system of procedure. Mr. Sayce insists that the famous Ebers manuscript, which is dated from the earliest reigns, has no greater antiquity than this. Medicine at this period, he declares, was in almost as advanced a stage as in the age of Galen; the various diseases were carefully distinguished from one another, and their symptoms were minutely described as well as their treatment. The prescriptions recommended in each case were made out in precisely the same way as those of a modern doctor. One was derived from a fashionable oculist of Byblos in Phœnicia, but the greater part belonged to earlier Egyptian medical men of the first dynasties. They were of mineral as well as vegetable composition, consisting of draughts, blisters, powders and clysters. "Medicine is practiced among them upon a plan of specialties," Herodotus declares; "each physician treats a single disorder, and no more. Thus the whole country swarms with medical practitioners; some undertaking to cure diseases of the eye, others of the head, others again, of the teeth, others of the intestines, and some those complaints which are not local." It was a maxim with the last of these: "If but a small portion of the body suffers, the whole body is ill."

The skill and learning of the physicians of Egypt made them famous in the neighboring countries. The prince of Bakhtan (Bashan) sent an embassy to Ramases XII. for medical aid for his queen's sister. A royal scribe, "intelligent in his heart and skillful with his

fingers," was sent, but to no good purpose. Some years later a second envoy came asking for the ark or sacred boat of Khonsu* or Hermês to be carried to Bakhtan. This was done, a goodly company of the Pastiphori and physicians bearing the receptacle of the divinity. This time the mission was successful; the princess speedily recovered, and the god received the glory.

Other sovereigns availed themselves of the services of physicians from Egypt, and not always, it would seem, to their benefit. King Asa of Judæa, it is recorded, became diseased in his feet, and "sought not unto the Lord;" in other words, he did not consult the priests (see *Deuteronomy* xix., 17) who practiced the healing art, but employed "physicians," or *Rephaim*, instead. They failed, however, notwithstanding their superior attainments, "and Asa slept with his fathers."

The kings of Persia, always ready to adopt foreign customs, also procured physicians from Egypt. Kyros or Cyrus sent to King Amasis for "the most skillful of all the Egyptian eye-doctors," and Dareios Hystaspis "had at his court certain Egyptians whom he reckoned the best-skilled physicians in the world." They seem, however, to have been very inexpert as bone-setters. The king had the misfortune to dislocate his ankle, and their manipulations only made the mischief greater. He passed a whole week sleepless from the severe pain. At that time he heard of Dêmokedês of Krotôna, who excelled as a practitioner of surgery, and had held employments as archiatros for several cities, but was now a slave at Susa. The Greek was brought to the king, and soon succeeded in reducing

*"He was resorted to," says Professor Tielé, "for the cure of all diseases, or for the exorcism of the evil spirits that inflict them."

the dislocation. He afterward interceded successfully for the Egyptians who had been sentenced, for their awkwardness and ill success, to be crucified or impaled on the stauros. Doubtless, the fact was that he was a disciple of Pythagoras, who in turn had been instructed by the Pastiphori of Egypt, inspired him to this magnanimity. The lives of the physicians were spared, but after that period the Persian monarchs obtained their physicians from Iônia.

BABYLON AND ASSYRIA.

Herodotus makes the extraordinary statement that the Babylonians had no physicians. It was their practice, he affirms, to place the sick person in the public square, and everyone passing by was required to ask him respecting his malady. If the individual making the inquiry had ever himself had a similar complaint, or if he knew of any one else that had suffered from it, he must give advice to the invalid, telling him of such remedies as had been found beneficial.

This practice, however, was not peculiar to ancient Assyria. Something like it existed in other countries, clear down to the present era. Strabo declares that it was in vogue in Egypt itself, where regular practitioners of the priest-caste were numerous, as well as secular physicians. But the vocation was not then exclusive, and there was neither code nor unwritten law to prevent the simple pharmacy and therapeutics known to the people from being employed beneficially, and even accepted by those officially prosecuting the art of healing. Perhaps the modifications that have been made upon the primitive methods, have not been so great an improvement as many may insist. It is very probable, however, that Herodotus referred only

to the *iatroi* (magoi) or professional mediciners, like Dêmokedês, and the Asklêpiads and Hippokratians who were members of an oath-bound or sacerdotal order. Before his time, the Chaldæan priests, including the *Asaphim*, had been exiled by Dareios Hystaspis and had migrated to Pergamos. This probably accounts for the assertion of Herodotus.

The existence of the practice of placing the sick in public thoroughfares, is shown by other writers, "Is it nothing to you, all ye that pass by?" demands the Hebrew prophet; "Behold and see, whether there be any pain like mine." The synoptic *Gospels and Acts of the Apostles* mention the same custom. It is recorded that wherever Jesus went, the sick were brought and placed in his way in the expectation that he would restore them to health.

To suppose that there were not physicians in the Euphratean countries during the archaic period, would be preposterous. The cuneiform records inform us that the earlier Akkadians, inhabiting that region, regarded every seventh day as *sulum*, or set apart; and that it was forbidden, even for the king himself, to eat cooked food, to change his garments, to put on new clothing, drive in a chariot, or "take medicine for the ailments of the body." The *Assyrian Tablets* also contain the account of Izdu-bar (*i. e.*, son of the Æthiopian or Indian) the legendary founder of the united sovereignty of the Babylonian Empire. "Disease had filled his body," and he made his way to Adra-hasis or Hasis-adra, the immortal sage, to be healed. Like Naaman, the Syrian, he bathed in the water, and "cast off his illness. Health covered his skin and restored the hair of his head, hanging down to cover the cloak of his body."

The god Hêa, both with the primitive Akkadians and their Assyrian successors, was the lord of life and Grand Master of "the mysterious Rite, the formula, the all-powerful secret word, which would thwart the efforts of the formidable powers of the Abyss." He was represented by such figures as the triangle by which the cuneiform characters were made, the fish that was symbolized by the peculiar fashion of the priestly dress, and the *nisrokh*,* or eagle-headed man bearing the fir-cone† in one hand and the mystic reticule in the other. "He was emphatically the god of healing, who had revealed medicine to mankind." (Sayce.) The son of this divinity was Merodakh,‡ the Bel of Babylon, revered as the Prince of Light, the Conqueror of the Dragon, the Redeemer of mankind and bestower of life. He was likewise depicted as holding the cone in one hand and the reticule or other characteristic symbol in the other. He was also the divinity of the planet Jupiter, and hence the practice arose of placing his symbol at the beginning of medicine and magical formulas, as a prayer for his benign offices.

"Merciful one among the gods,
Generator who brought back the dead to life,
Silik-mulu-khi,§ the king of heaven and earth, * *
May the invalid be delivered from his disease,
Cure the plague, the fever, the ulcer."

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* Probably the Rokh of the Persian tablets, and the Garuda of the Hindus, as well as the eagle of national standards.

† The fir-tree and its kindred cone-bearers, all possess medicinal virtue, and were employed both as remedies and as magic or religious emblems. The Akkadians probably brought it from Media. The Tree of Life was depicted in Assyrian sculptures, as having cones like those of the pine and fir, and they were placed upon the wand or thyrsos which was borne in religious processions.

‡ Originally in Akkadian and Hittite dialects, Amar-utu-khi, the splendor of the Sun. Cyrus worshipped him as being the same as Mithras. (Xenophón.)

§ Akkadian name of Merodakh, signifying, "The one who brings good to human beings."

It was customary to place the image, or characteristic symbol, of Hêa and Merodakh, one on each side of the door of the invalid's apartment, and to hang sacred texts about his room and head, in order to exorcise the evil spirits that had caused the disease. Invocations, or rather incantations, were made like the following:

"Disease of the bowels, disease of the heart,
The palpitation of the heart;
Disease of the vision, disease of the head,
Malignant dysentery;
The humor which swells,
Ulceration of the veins, the micturition which wastes,
Cruel agony which never ceases,
Nightmare, * * *
Spirit of the heavens,* conjure it,
Spirit of the earth,† conjure it."

Religious incantation, miraculous and mesmeric cases, however, by no means comprised all the healing knowledge of the *hakhamim*, or "wise men" of Babylon. Closely allied as such knowledge was to astrology and occult lore, there was likewise an herbal science which related to the treating of disease. The priests understood the Æsculapian art, both on the theurgic and the medical side; and while employing the resourses at their command, they taught the convalescing patients to believe their cure to have been wrought by the divine operation itself.

The Assyrians and Babylonians, as has been already intimated, derived much of their knowledge and literature from the more ancient possessors of their country. At a very remote period, believed by many scholars to have extended thousands of years into the past, a

* Ana, the Most High, the ruler of the universe.
† Hêa.

people with a language closely resembling that of the Hetrurians, Ugrians and Mongoloid Skyths, emigrated from the Zagros mountains and the Highlands of Media into the valley of the Euphrates, where they founded numerous cities. This was the "Hamitic race of Akkad," from which descended the Chaldæans of Babylonia, and the priest-caste of Assyria. Among their literary remains were astrologic tablets made when Sargon I. was king of the country. This monarch, in his infancy, had been placed by his mother, in the faint hope of safety, in an ark of rushes, and set afloat upon the river Euphrates. His reign, according to the *Proceedings of the Society of Biblical Archæology*, was about 3,800 years before the present era.

There were "university-towns" in those days, such as Ur-ukh (Erech), Akkad, Nipur, Kutha, Larsa and Borsippa. At an early period in Babylonian history, Mr. George Smith informs us, a great literary development had taken place, and numerous works were produced which embodied the prevailing myths, religion and science of the day. The antiquity of this literature does not compare unfavorably with that of Egypt. Indeed, Baron Bunsen does not hesitate to ascribe the learning of the latter country to Chaldæan origin. Of course, there were customs in Egypt, such as circumcision, that were purely African. But the analogies were sufficiently numerous to afford good ground for that judgment.

It is not to be supposed, however, that the learned men of the Orient were merely astrologers, or that the healing art was simply that of Siberian Shamans, the employment of charms, amulets and conjurations. They had also their medicaments, both internal and external, which they made use of like practitioners of

later days. Mr. J. Halevy has preserved the following —*Records of the Past*, Vol. VI.:

"*For the Eruptions and Humors which Afflict the Body:—*

Fill a vase which has held drugs with water from an inexhaustible well;
Put it in a sheet of ———, a ——— reed, some date-sugar, some urine, some bitter hydromel;
Add to it some ———;
Saturate it with pure water [and]
Pour upon it the water of the [sick] man.
Cut reeds in an elevated meadow;
Beat some pure date-sugar with some pure honey;
Add some sweet oil which comes from the mountain;
Mix them together;
Rub [with this ointment] the body of the [sick man]."

We perceive from this that pharmacy was an art among the Assyrians, and that they were in the habit of keeping medicines in jars and vases made for that purpose. We do well to bear in mind that, in those early times, the various branches of learning were not differentiated, as they have been with us. Medical knowledge was included with astronomy, religious worship and magic lore, which were ignorantly imagined to be beyond the province of the common understanding. Hence, there has been a direct tendency, equally credulous in another way, to discredit them altogether.

INDIA AND PERSIA.

The Sacred Books of the Parsis recognize the former existence of the Aryan Home-Country in which the ancestral tribes of Hindus and Persians dwelt as a single nation. They reared cattle, tilled the soil, employed horses for riding and the drawing of vehicles, had dogs and other domestic animals, kept bees, made

ale and mead for drinking, raised grain and took it to mill in wagons, had iron tools, tanned leather, navigated the water, and fabricated weapons for warfare. An examination of the root-words of the Indo-European languages, which proceeded from the archaic Aryan speech, has revealed as much. The primitive Aryans, it will be perceived, had a civilization well advanced, and a religion with a priesthood. That they employed healing plants and had physicians among them, likewise appears.

The Erânians cultivated the soil and followed the arts of productive industry, while the nomadic Aryans kept flocks, and often encroached upon their fields of grain. It was the story of Cain and Abel—the agriculturist and the shepherd. As is the case in all quarrels of families, neighborhoods, sects or parties, the relations of these kindred peoples were characterized by intense animosity. The wandering tribes made their way into India, and after long centuries of conflict, established their dominion, and with it developed the Vedic, Brahmanic, and other religions. The Erânians, meanwhile, extended their migrations southward and westward, and formed a distinct empire, in which sprang up a worship proximately monotheistic, and directly conflicting with that of their Aryan congeners.

In their sacred book, the *Vendîdad*, a fargard or chapter is devoted to the art of healing. Zorôaster asks of the deity Ahur'mazda, the all-wise and powerful, who was the first of men skilled in healing? who was wise, successful, able, eminent, brave, obedient, keeping back sickness and fever from bodies of men? The Divinity answers that it was Thrita. He had besought the Giver of all Good to make known to him

the means to combat successfully with sickness, pestilence, pain, the burning of fever, the malignant ulceration and foulness in human bodies, which the Evil Spirit, Aramanya (Angramanyas), had engendered.

"Then," adds the Divinity, "I, who am Ahur'mazda, brought into existence the healing plants, many and many hundreds, many and many thousands, many and many tens of thousands, and with them the one Gôkarenê—the white homa, or tree of life—giving health to the bodies of men. * * I counteract sickness; I combat pestilence; I resist pain, fever, the putrid ulceration, the foulness, the malignant eye which the Evil Spirit inflicts upon human beings—every disorder and mortal ailment, every sorcerer and witch, and every malign influence."

The angel or divinity, Airyaman (the friend), appears to have been the Æsculapius, or tutelary of the healing art with the Erânians, their Persian successors, and likewise with the Aryans of the farther East. He is lauded in the *Vendidad* as the healer of those whom the Evil One had afflicted, the averter of evil, and promoter of happy nuptial alliances He applied his art when the Holy Word was insufficient alone. In the *Vedas* he is associated with Mitras and Varuna, the lords of the sun and sky, exercises like functions as among the Erânians, and is chief of the *pitris*, or spirits of the dead.

In like manner, Thrita, although he is thus celebrated as the first who exercised the art of medicine, and the hero Rustam as his descendant, is nevertheless also described as a benefactor of the Hindu tribes, putting an end to diseases, appeasing evil agencies, and assuring long life.

The directions of the *Vendidad* in regard to physicians and surgical operations, plainly indicate that when they were written, the Aryan peoples had not separated. They can not, however, have been very acceptable to those who worshipped Indra and other dævas as divinities. Zorôaster asks: "When Mazda-worshippers wish to become physicians, whom shall they first make trial upon—the dæva-worshippers or the worshippers of Mazda?" To this Ahur'mazda replies: "They shall make trial on the dæva-worshippers first. If a beginner cuts a dævayasnian the first time and he dies, a second time and he dies, a third time and he dies, then he is incapable forever. The Mazdeans shall not consult him, nor shall he wound them by cutting. If they do try him, and he does them injury, he shall undergo the punishment for willful injuries. But when a beginner operates thrice upon dæva-worshippers, and they recover, he is capable, and may heal Mazdeans by cutting as he sees proper." His remuneration was strictly provided according to the rank and quality of the patient. The same fargard enumerates three classes of practitioners: "physicians with knives, physicians with herbs, and physicians with holy sayings," declaring that there is most healing among physicians who use the *manthra spenta*, or holy word. A later scripture, the twenty-second fargard of the *Avesta*, however, makes the manthra inefficacious, compelling the resort to the skill of the angel Airyaman.

The Sacred Books of the Hindoos indicate a very thorough conception and knowledge of the healing art. The *Yajur Veda* is itself a treatise upon medicine and surgery, and the commentaries upon it by later writers reveal the existence of a code and regu-

lations sufficiently stringent to satisfy the most exclusive champion of medical ethics. The whole authority of the Brahmanic hierarchy was put forth to uphold the sacerdotal dignity of the profession, and to exclude laymen and members of the landed and yeoman castes from ever becoming physicians. What has been attempted in European and American countries under the pretext of regularity, higher scientific attainment and governmental license, was imposed in ancient India by caste-rules and the influence of the priesthood.

The study of medicine was forbidden to all except men of the Brahmanic rank. Before the youth was permitted to begin it, he was required to pass an examination in regard to his previous instruction and personal character. The final examinations are also described as very severe, enabling but a small number to pass them successfully. It would seem to have been the intention of the Examiners of that period to prevent as many as possible from engaging in practice. By this expedient the endowments of the favored ones might be made as large as could be extorted. They stooped to invoke the civil authority to protect them in this endeavor, and some rájás were found pliable enough to issue decrees to regulate the practice of medicine, and to punish those who ventured to engage in it without having received authority from the Brahmans.

Let it not be supposed, however, that the free lances that first established the Aryan dominion in Northwestern India, would patiently tolerate such assumption of arbitrary power. The chief of every family and clan refused to surrender his family religion to the umpireship and direction of the priests. Rájás

and Rajanyas persisted in exercise of sacred functions, and for many centuries disputed the pretensions of the Brahmanic caste. This resistance to priestly usurpation is set forth by the story of Viswàmitra, the rájá of Kanoj, who contested with the Brahmanic pontiff, Vasist'ha, for the right to officiate at public worship, and to chant the *mantras* which were believed to assure victory and prosperity to the Aryan cause. He appears to have been the champion of learning, as well as of social equality and despite the false statements of the Brahmans to have won in the controversy. Hence he is said to have taught the act of war and mechanical science, and his son, Sushruta, is celebrated as the first teacher of medicine in India.

The attainments of the medical practitioner, as laid down in the writing of this distinguished author, were very thorough. "A holy man thus set apart should dissect," says he, "in order that he may know the internal structure of the body. The minutest details were accordingly set forth ; the principal viscera were named and described ; the joints enumerated and their functions explained, the nerves distinguished from the other fibres, and the peculiar constitution of the skin critically defined. The humoral pathology seems to have been the accepted hypothesis, and all theories of temperament and disease were modelled in accordance with that notion.

Surgery evidently attained a high degree of perfection. The Indian practitioners were superior to the Egyptian. The commentary upon the works of Sushruta treats very fully of this art. It explains lithotomy, abdominal section, hysterectomy, as well as various plastic operations, giving very precise directions in regard to the proper modes of performing them.

THE INDIAN MATERIA MEDICA.

Sushruta was the first Indian author to make a classification of drug-remedies, and to construct a scientific terminology. He based his arrangement upon the assumption that disease is either an impairment or vitiation of the force which permeates the fluids of the body, and influences their circulation, absorption and secretion, or else an inordinate activity of the natural appetites and emotions. The terms used by him imply fixed ideas in regard to the properties of medicinal substances. Sushruta taught, however, that all forms of vitalized matter are constant and never exchange their type; the heavier elements which make up the solids, being never subject to transformation into fluids, and the lighter elements which compose the fluids, never becoming changed into solids. The erroneousness of this doctrine is abundantly evident.

Sushruta's classification of medicinal plants has a specific significance, and accords with the more elaborate and precise experience of the present day. He is very tenacious of the injunction to use fresh drugs only, as more certain in their properties and powers to control disease. Our manufacturers of botanic and vegetable medicines at the present time, could do well to observe a like carefulness. Organized matter, as all intelligent students of chemistry are aware, evinces a greater energy of action in a fresh state, than after it has been exposed to air or moisture, or to artificial heat, or to comminution or precipitation under the hands of a manipulator.

Sushruta divided all vegetable remedies into two large classes, according to their effects upon the

human system during the progress of disease; the first including the evacuants of morbid humors, and the second comprising those which regulate or moderate the excessive action of such humors. The two classes bear the Sanskrit names of *Sanshod'hana* and *Sanshamana*. The former embraces a miscellaneous group of purgatives, expectorants, diaphoretics, diuretics and some blood-depurants or alteratives, indicating a belief in the presence of active principles in them which operate through the blood upon special organs or glands in order to relieve the body of a supposed morbific agent, irrespective of the changes which they may severally induce or bring about in restoring diseased parts to health. The second class contains a greater variety of operations. It includes thirty-seven groups of vegetables, the sensible effects of which, upon the various terms of the body are mostly remote or gradual, being indicated in sthenic diseases, or in the chronic stages of disease generally.

The writings of Sushruta, however, have been so mutilated as often to leave us in doubt of the modes of preparing many of his remedies. Later experience too, has shown that several of the drugs which he described, have properties materially different from those which he has represented.

CHARAKA.

Agnivesha, a writer of the same period, better known as *Charaka*, was more precise in his classification, approximating to the more modern European method. He was far broader than his successors in his entire views. He did not aim, he declares, to bind the more talented and enquiring physicians to

his descriptions, but rather to guide the less capable practitioner, and those other individuals who were able to help the suffering by the aid of written treatises alone. Nor did he lay down his views and methods dogmatically as finalities not to be corrected and improved. Constant experiment and an experience searching far and wide, he indicated, must be the practitioner's true guide in determining the virtues of drugs or their combinations. Accordingly, while devising out of some five hundred different drugs, fifty compound groups for selection, which might satisfy all possible indications in the practical treatment of disease, he invited further investigation of the action of these compounds, and likewise the ascertaining of the virtues of new remedies which might yet be discovered.

His usual mode of preparing medicines was by steeping and decoction; and in his terms of classification he had in view the remote and specific action of the remedies upon the functions of the body, or to their efficacy in relieving fixed symptoms and phenomena which are the precursors and actual indices of grave disturbances.

The endeavor, at that remote period, to fence about the orthodox and legalized practitioners with penal statutes, was no more successful in India than in other countries. It failed utterly, as it always must, to preserve a medical caste and monopoly, or even to assure thorough knowledge of the healing art. A protected vocation is very certain to languish, except it is constantly cossetted. There were heterodox practitioners, all through the early times, in India. The commentator upon the works of Sushruta acknowledged their existence, and labored assiduously to vilify them.

"Such an one," he remarks, "may be known by his good opinion of himself, and his ill will toward the genuine physician. He flatters the friends of the patient, is hesitating and doubtful in the performing of difficult operations, and protests that his want of success is caused by bad attendants. Such men avoid the company of the instructed physician as they would a jungle."

It will be observed that Charaka, himself the most accomplished medical author and practitioner of his time, cherished no unfriendly sentiment of the kind. He recognized those as worthy who were able by the aid of written treatises, without professional teachers, to help those suffering from disease; and he sought manfully to communicate to them the proper knowledge. He stands divinely high above those who would restrict, limit and proscribe. We are forcibly reminded of the little episode of the *Gospel:* "And John said: 'Master, we saw one casting out devils in thy name; and we forbade him, because he followeth not with us.' And Jesus said unto him: 'Forbid him not.'"

The boasted superior excellence of the legalized physicians of India did not permanently continue. The writings of the older savants, Sushruta, Atreya, Charaka, Dhanwantari and others were mutilated and interpolated by those who came after them in later centuries. Their study gradually fell into neglect from want of encouragement. Their teachings were misapplied in practice, and their theories misunderstood in principle. Under the arbitrary restriction of the Brahmanic caste, observation was neglected and the sources of new thought were dried up. The diagnosis of disease became in time a matter of

guess-work and uncertainty, and the treatment empirical, hap-hazard and dangerous.

In this dearth of medical scholarship, the practitioners followed servilely after a prescribed routine, and themselves adopted the methods of the charlatan. An eminent native physician thus forcibly describes the low condition of the art: "The nomenclature of diseases, with their classes arranged according to the seat, origin, or nature, was transmitted through successive generations of enfeebled and depressed intellects; and practitioners of the art were compelled to ply it on the borrowed and indirect testimony of legendary accounts of supposed, and often fanciful virtues of drugs and their combinations. Such unworthy followers of Sushruta and Charaka being necessarily dwarfed in intellect and warped in observing powers, *were compelled to live largely on the credulity of their patients*, or by acting in a measure upon their imagination and prejudices; alternately seeking to kindle hope or to excite fear of loss of health, of death; they themselves, in their turn, *trusting to the mercy of chance*, or to the fancied contrivances of an erring imagination. This state of medical science still prevails among the Hindus unhappily to a large extent."

CHINA AND OUTER ASIA.

Everything Chinese, whether historic, scientific or even political, seems archaic. It has been fashionable to decry Chinamen, to represent them as inferior in race and culture, and, at the same time, to adopt their usages and various arts without giving credit to the source from which they were derived. Yet when nations now existing were unformed, and people classed as ancient were in their infancy, China was very old

and had a literature too voluminous to describe. Her trade was world-wide; articles brought thence have been found in the old monuments of Ireland, and in the tombs of forgotten Egypt.

When Caleb Cushing was sent by President Tyler as ambassador to China, in 1844, he took occasion, at his first audience with the Minister of State, to set forth the greatness of this country, and in particular the numerous inventions to expedite and obviate the necessity of human labor. The Mandarin listened with true Oriental politeness and simply replied: "All these things we once had here, but our fathers found it better to lay them aside, and leave the work to be done by men."

The Chinese, like other archaic peoples, were emigrants from Pamir, or Meru, "the roof the world." They went out, not as conquerors, but as cultivators of the earth, and hence we find their heroes always to be peaceful sons, fathers, and benefactors of the people. To this fact we attribute the monotony which foreigners describe as stagnation, and the lack of history, such as is made up in other countries with the record of the crimes and oppressions of rulers, and the suffering and degradation of their subjects, which made the earth antedate, and furnish the model for Pandemonium.

The name given the country by Marco Polo was Kathay, and to this day the Russians term the people Khitans. This was once the designation of the population of Asia east of Turkestan, as well as of numerous peoples on the Upper Euphrates, in Syria, Asia Minor, and perhaps Palestine* and Egypt. They

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*Hittites: compare *Genesis* xxiii., with *Kings* I. x. 29 and II. vii. 6.

were the first historic coiners of money; and Krœsos, the last Sardic king, was of their race. In the East they were the inventors of paper, discoverers of magnetism and gunpowder, and manufacturers of silk. Wherever they went, they appear to have carried a written language and to have promoted civilization.

Hence we are not unprepared to learn that in that early antiquity, China bore its share in scientific advancement. Conquerors of this country sometimes mutilated or destroyed their records, yet there are evidences remaining of the science of these far-off periods. In the *Book of Historic Documents* it is stated that the King Chin-nun, in the "eighth period," invented the plough, and made great discoveries in botany. In one day, or season, we are told that he discovered seventy species of plants that were poisonous, and seventy other species that were antidotes to them.* Making due allowance for the exaggeration which is characteristic of all Asiatic literature, we can safely take for granted that this age was a time when invention and learning were generously cultivated.

CHINA IN LATER YEARS.

About two hundred years before the present era, the Emperor had attempted a revolution in the politics of the country, and commanded the destruction of all books relating to its former history. Those who did not obey were put to death. The result was rebellion, overthrow of the Thsin dynasty, and the establishment of the king of Han in its place. The second monarch of the new dynasty caused a collection of books to be made for the Imperial Library. In this

*All Chinese theories are based on the hypothesis of dualism, or light and dark, male and female, poison and antidote.

he was very successful. Some thirteen thousand were recovered, of which 868 were upon medicine. Since that period, literature upon that subject has wonderfully increased, with, however, the Chinese peculiarities and little innovation on old methods.

It is an article in the Chinaman's belief that all diseases and calamities are the result of sin. If a man should be killed by lightning, all who heard of the catastrophe would with one voice condemn him. He must have poisoned some one, or intended to do so; at any rate, he must have been guilty of some great crime. Blindness, leprosy, or other bodily ailment is thus ascribed to the operation of a retributory decree, the execution of which is superintended by the ruling powers of the celestial world. The charge of personal blame, however, is often explained as relating to some misdoing in a former term of existence, which is expiated in the present life. This notion is essentially Buddhistic. The Taú sect entertain views somewhat different. They regard health, longevity and other benefits as accruing from a virtuous life. Their founder, Laotsi, taught that all natures, divine as well as human, were twofold; that there was a Taú, the source of all that might not be named, and also a Taú that was the maternal principle and producer of all phenomenal existence. The human soul in like analogy had two phases—a divine essence from the celestial world and a grosser passional product from the earth. It was thus able to impart the life of the higher region to this inferior nature. Salvation was the same as healing, a relief from all suffering of body or mind. Dr. Edkins affirms that they believed that the body could be made impregnable against disease or death, and so like the corporeity of a divine being. Similar

beliefs have been entertained in western countries, and seem to find countenance in the New Testament itself. The fact, therefore, only serves to show that the Chinese, in this respect, were like other peoples, both ancient and modern. The large amount of medical literature in the Imperial Library is evidence that they were awake to the necessity of applying efficient remedies to disordered bodily conditions.

Of anatomy they had little knowledge, and in operative surgery they were particularly unskillful. Acupuncture, which was first introduced in this country by an Eclectic physician, and discredited accordingly, but was afterwards imported from Germany, was practiced in China many thousands of years ago. Inoculation for small-pox was performed a thousand years and more before the present era. They use few medicines derived from the mineral kingdom. Their materia medica embraced almost four hundred different remedial agents; and the general mode of extracting the active principles was by steeping or boiling in hot water. It has been a popular jest to enumerate the articles used; but if the drugs and foul materials should be named, which have been current in Europe within the last four centuries, the Chinese would suffer little by the comparison.

They distilled alcoholic spirits four centuries or more ago, but the use of them as beverages was denounced. They make whiskey, but employ it for preparing medicinal tinctures. Indeed, their reputation for skill in medicine and the arts was wide-spread, and continued through the Middle Ages. William of Rubruck bears this testimony respecting them: "These Kathayans are first-rate artists, and their physicians have a thorough knowledge of the virtues of herbs, and an

admirable skill in diagnosis by the pulse. During the campaigns of Hulakan, the grandson of Tamerlane, in Persia, Chinese engineers were employed on the banks of the Tigris, the ancient Assyria, and Chinese astrologers and physicians could be consulted at Tabriz."

The *Penal Code* of the "Flowery Kingdom" has no arbitrary prohibition, either by caste-law or the mandate of a privileged order, against anyone desiring to practice medicine. Every man is free to choose his own calling, and to select his medical adviser. If, however, improper practice on the part of the physician, whether by unsuitable drugging or cutting, shall contribute to the death of a patient, an inquest of medical men is called to investigate the matter. The penalty is the same as for homicide. If, however, it shall be shown that he acted with no intention to do injury, he is let off on payment of a fine; but he is required to quit the medical profession forever. Europe and America have much to learn from the East.

If, as has been sententiously remarked, "the knowledge which a people possesses of the art of healing, is the measure of its refinement and civilization," the Chinese nation holds no low rank in the scale. Those who leave it out as a factor in the world's scientific achievements, reckon ill.

THE SKYTHIC AUTOCHTHONES.

The numerous tribes at the north and west, the Ugrians, Turanians (Turkmans), and other Skythic hordes, can be dismissed with barely a mention. It may have been in very ancient periods, when a literature was created among them, that a knowledge of healing methods was also disseminated. We have reason to believe that this was the case. *Magic*, as

all learning was formerly designated, embraced the various arts of social life, the service of mankind, as well as communion with spiritual beings. Herodotos has mentioned, among other customs of the Skyths, their use of the vapor-bath, a practice still common among their Russian descendants. They were familiar with many plants now reckoned as medicinal, including the narcotics and "witch-herbs," such as the poppy, henbane, hemp, nightshade, monk's hood, stramonium and fox-glove, which were employed to produce ecstasy, somnambulic conditions, and other abnormal phenomena. They also knew the art of fumigation, both for magical and for remedial purposes. They communicated their knowledge to the nations better known in history. The Delphian oracle, was first established by them in the prehistoric period, the site having been selected over a fissure in the ground, which sent up a vapor producing anæsthesia in those by whom it was inhaled. It became famous also as a resort for persons suffering from various maladies, and Apolló was often designated as Paión, the healer.

Peschel has for all the peculiar arts and methods of thaumaturgy the single term, *Shamanism.* He includes everything mysterious, occult or magical under this head. He finds it convenient to dismiss them with an epithet; but whether this is altogether just may be doubtful. The earlier peoples were religious beyond what we of modern times are able to conceive; and very naturally their priests and patriarchs had supervision of all matters beyond the common departments of human activity, among which they included the exorcising of spirits and the healing of diseases. The cognate peoples of Akhad, Media and Assyria participated in the same beliefs. The *Tablets* deciphered by

Mr. George Smith treat of seven spirits directed by Lubara, that placed illness upon the body of the people, and give significance to the story of the magadalen of the Syrian shrine from whom they were expelled. Prayer, sacred chants, sacrifice and peculiar forms of abstinence were employed to propitiate them. The inhabitants of Northern Asia, at the present time, entertain similar notions; and we, with our boasted superior culture, are not so far removed from them as to be warranted in regarding them with any supercilious disdain. It is easy to prate about superstition, but the quality so called is more deeply embedded in human nature than, perhaps, we are able cheerfully to acknowledge. Much of our dogma, much that is called scientific in medicine, is an outgrowth from that source. The names have been changed, but the things remain.

PREHISTORIC GREECE.

From the East and the North the same notions, arts and methods were transmitted to the Akhaian and Pelasgic countries of Greece. The legend of Médeia of Kolkhis describes her as possessing magic powers, the gift of Hekaté or Hakti, the Bhavani of Occidental Asia, queen of night and mistress of the realm of death. Among the arts which she is said to have exercised were the restoration to life, health and youth, and the rendering of the body invulnerable. Mokh or Mokhos, the physician, was also reported as to be a sage deeply versed in natural and physiological science, and as the founder of the knowledge of anatomy. From his descendents, the "prophets" of Sidon, it is said that Pythagoras received "sacred

instructions." Homer has described Agamédé, as proficient in herbal lore.

> "The fair-haired Agamédé, eldest-born
> Of King Augeias' daughters, was his spouse;
> And well to her each healing herb was known,
> That springs from the great earth."

The poet Theokritos declares her the rival of Kirkė and Médeia in magic art; the facts being that medical knowledge was included under the denomination of magic, and that is was supposed that a physician could perform superhuman achievements. Hyginos describes her as the mother, by Poseidón, of the heroes Belos, Aktòr and Diktys. So closely was the healing art allied, in ancient estimation, with the familiar society of gods.

Perhaps few people received more from other countries than did the Greeks, and none appear to have been more tenacious in the pretense that all their attainments originated with themselves. Their first knowledge of the healing art was exhibited among the Pelasgic populations of Thessalia and the Peloponnésos. Accordingly we find traditions of a King Apis reigning in Argos, as having been the first physician. As if to confuse the story beyond credibility, one legend makes him a descendant of Okeanos; a second, the son of Apolló, the god of healing, and a third as the colonizer of Egypt, afterward commemorated by the Sacred Bull.* It is sufficient for us to understand the myth as signifying that the art of medicine in Greece was coëval with the earliest civilization of the country.

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* It is significant that the svllable *Ap* appears in the names of the medical gods of Greece. Thus we have *Ap*ollo, Askl*ép*ios, or perhaps more correctly, Aisku*lap*ius, and the name of Apia for the whole Morean peninsula.

Apollό was the favorite god of the Greeks. Under Asiatic and Libyan influence, Poseidón had been originally worshipped, and the Pelasgic Zeus. With the revolutions of the archaic period, which subverted the *basileis*, or priest-kings, and substituted the commons' kings or tyrants, the new Zeus of Olympus, the son of Kronos, became the Supreme Divinity. The cult of Apollό was made a part of the new worship, and the son of Zeus was commemorated as the god of music, poetry and divination, and the physician of the gods. Paiéon, however, of the older gods is set forth in the *Iliad* as curing the wound of the god Arés, received from Diomedes, and Pluto, when pierced in the shoulder by Héraklés. The *Odysseia* also declares the Egyptian physicians skilled above all, "for truly they are of the race of Paiéon." In honor of Apollό as the god smiting with death, and restoring to health, the hymns chanted in his praise every seventh day of the month were called *pæans*.

The Northern Pelasgic myths ascribed the primitive development of the art to a wise personage of Thessalia, Kheiron. The tribe to which he belonged, the Kentaurs, has been the theme of many fables and the subject of much conjecture. It was common to depict them after the manner of Assyrian sphinxes or cherubs, as human figures above and horses below. Probably it was only a mode of rebus in picture-writing to indicate them as the progeny of the Hippoi, the priests of the goddess Hippa or Rhea among the Magnetes, as the poet Pindaros has described their origin. The name *Kentaur* may have been formed, however, from the Semitic terms *kahen* and *tur*, and so mean a priest of the rock-sanctuary. This would be appropriate for the wise Kheiron, but hardly so well for his

more warlike countrymen. Those who are skillful in deriving every race and custom in Greece from Indian sources, have attempted to trace them from the Gand'harvas of Indian fable. Mr. E. Pococke, who is often more plausible, although more imaginative, declares them to have been "Kand'haurs, or emigrants from Kandahár," and akin, as their peculiarities show, to the Catti and Rajputs. The *Charon* was the sage and counsellor of the tribe. This description tallies with that of Kheiron,* the instructor of Jason the Argonaut, of Hérakles, Asklépios and Akhilleus. His abode was in a Sacred Cave, to which all resorted, and mythopœic lore describes him as the son of Kronos by a Hippeian mother. Two of his pupils, Akhilles and Asklépios were famous for their knowledge and skill in healing. His art seems to have received from him its ancient name, *kheirourgike*, and the practitioners of Thessalia, were designated at *Kheironidae*. They even asserted that Kheiron was the ancestor of their family.

Asklépios or Æsculapius appears to have superseded all the other hero-gods as patron of the healing art. Although the name as well as traditions imply a Pelasgic origin, he originated beyond the Mediterranean. His Asiatic character is indicated by the symbol or totem by which he was often represented, the serpent upon the *stauros* or tree of life. In all the East, in Africa and aboriginal America, the healing art was denoted by this figure, the coluber, royal asp, the hooded snake or the rattlesnake. Even the Greek artists who changed the archaic methods, represented the god as an old man with a staff or wand encircled

* It has been suggested that the name *Kheiron* was derived from *kheir*, the hand; and therefore, that the legend signifies that the healing art as represented by him, was chiefly exercised by manipulation, both in the forms of massage and mesmerism. It is apparent that such was the fact.

by the sacred animal. Hygieia, his daughter, also had a bowl in which the serpent was feeding, or it was coiled around her body and arm. The Tyrians represented the altars with serpents winding round them, or emerging from the receptacle beneath. Even the *nahash* of the Garden of Eden was Æsculapian. In the dramas of the Asian and Samothrokian mysteries, the demigod was represented as beloved of the Great Mother, self-mutilated, dying and resuscitated again to new life. In Greece his temples had always a serpent and its progeny for tenants. When a new shrine was dedicated, a serpent was brought from Epidavros. Ovid relates the account of an embassy from Rome to obtain "the god Æsculapius" for that city, and the miraculous circumstances attendant upon their mission.

Grecian vanity, however, required that the god should be naturalized. Accordingly, the theologists represented him as the son of Apolló the healer. Several temples were designated as his birthplaces; the principal ones being in Messenia, Thessalia and at Epidavros in Argolis. One legend described him as born in the form of a serpent from the egg of a raven. Another declares him the son of the god by the maid Korónis, and that he became the ward of Kheiron. He accompanied the other hero-gods on the Argonautic expedition, and receiving from Perseus some of the blood of Medusa, performed marvellous cures with it, even restoring the dead to life. For this he was put to death by Zeus himself.

Homer and the other poets describe his children as inheriting the sacred art. Makhaon was skilled as an operating surgeon and Podaleirios as a physician. Both had their shrines and received homage as gods. The daughters were likewise honored as divine. Their

names, Hygieia or health, Aiglaia or radiant virtue, Panakeia the all-healing, and Iasó the savior from ill, indicate the Æsculapian art to have included not only medicine and operative surgery, but every means of preserving the body and restoring it to soundness.

The healing function was regarded as an attribute of divinity itself. Not only were Kheiron, Asklépios and his children enrolled in the pantheon, and commemorated by appropriate rites of worship, but the greater deities are described by Homer and other poets as exercising the physician's office. When Diomedes was wounded, the warrior Sthenelos extracted the arrow from his shoulder, and Pallas-Athena breathe into him a healing energy which removed all his hurt. He engaged again in conflict, wounding the goddess Aphrodité in the wrist and Arés in the breast below the neck. The god of war recovered under the care of Paión and the goddess was healed by her mother, Dioné, who touched the place with her finger. Hektór, the illustrious Trojan chieftain, crushed by a rock hurled by Aias (Ajax) was also restored to life and soundness by Apolló.

Homer also describes the Grecian chiefs at the siege of Troy as skillful in the healing art. Podaleirios, the son of the Thessalian Asklépios, cared for his brother Makhaon, whose dangerous wound had filled the whole Akhaian camp with dismay. The latter, when Menelaos was wounded, extracted the arrow, cleansed the injured place and applied healing balsams which his father had obtained from Kheiron. Patroklos in like manner treated Euryplos.

> "As taught by Achilles, who had learned
> The art from Chiron, righteous in his day,
> Beyond the other Centaurs."

Pliny had asserted that in that archaic period the art of healing was confined to the treatment of wounds. Even Plato declares that the god considered medical treatment ill bestowed where the patient was not capable of a perfect recovery. Other writers describe the Æsculapian method as consisting of magic or mesmeric agencies, medicines, and surgical appliances. Pindaros writes as follows :

"Some spells brought back to life ;
These drank the potion planned ; for these he bound
With drugs the aching wound ;
Some leaped to strength beneath the helpful knife."

With the adoption of the Argive Asklépios as the god of healing, his worship was engrafted upon the initiations of the Eleusinia. After the Greater Mysteries were over, the orgies of the god of Epidavros were celebrated upon the eighth day. Sokrates referred to these rites in his dying words : "We owe the cock to Æsculapius." The worship of this god had then extended over Greece and into neighboring countries. The temples were hospitals for the reception and treatment of the sick. The Asklépiads, a gens or caste of initiated priests, ministered at the various shrines and treated the maladies of all who sought their aid.

As every sacerdotal body in ancient times was a secret order having a free-masonry of its own, the Æsculapian fraternity exercised a like exclusiveness. Fathers instructed their children and teachers their pupils, but only as members of an oath-bound brotherhood, incurring the penalties of the out-caste for any violation of the compact. In time, there came to be two distinct classes of practitioners, the Asklépiads, who possessed the religious and occult learning, and the *iatroi* who had not been initiated, but were able

from there skill and deftness in treatment, to practice the art successfully. The latter were often slaves, or low-caste men, that were allowed to treat patients in public dispensaries, or such as were too poor to avail themselves of the more costly services.

The Asklépiads, following the archaic usage, professed to be lineal descendents of their ancestral god. They even preserved genealogies to prove the claim. Even Hippokrates and the historian Ktésias, as late the Persian period, prided themselves on this divine origin of the families to which they belonged. It would seem as though Hippokrates, by committing his knowledge to writing had disregarded his sacerdotal obligation, or else we must suppose that he only wrote upon such subjects as others were permitted to to learn. Doubtless, this was the case. Plato in the *Republic* severely criticises the necessity in a commonwealth for physicians, and castigates Hérodikos for having adopted methods different from those of the Asklépiads. Yet no modern civilized State would tolerate the practitioner who should neglect or destroy the life of a patient because of his inability to recover or unfitness to live.

In the ancient historic period, it became impossible finally to maintain a sacerdotal healing caste. Even the spurious oath which was imputed to Hippokrates was not respected. The famous school of Alexandria seems to have been instrumental in breaking down the wall of partition between the sacred and profane —the Asklépiads and those who were physicians by virtue of culture and native endowment. Medicine as a pursuit implies all this ; aspiring beyond the lust of power, it is the art of doing good to men.

CHAPTER II.

MEDICINE IN THE ANCIENT HISTORIC PERIOD.

Mr. Grote considers the historic period, apart from the illusions of legend, as commencing in Greece with the first Olympiad, 776 years before the present era. In other countries the period may have been somewhat earlier, but this date will answer the purpose. At this time the Hellenic national and religious institutions had generally superseded the Pelasgian. All over the world a spirit of unrest was in motion, and change seems to have been universal.

The traditions of the Heroic Age, as appears from Homer, ascribed everything indicative of artistic skill and superior mental attainment to the Phœnicians. They included under this name all the East, Egypt, Assyria and the Khetan countries, as well as Sidon and the other cities of the Levant. The "older gods," Poseidôn, Kronos, Rhea, and the Mysteries were from this region, preceding the later divinities of Olympus.

The healing art was also to be traced to Oriental sources. The *Iliad*, to be sure, represents that Pæéon was the physician of the gods, but the *Odyssey* declares that the Egyptian practitioners were of his race. Another poet asserts that it was the god Phœbus-Apolló from whom "physicians have learned the art of delaying death." Even as early as Homer, however,

the Oriental divinity Esmun or Bâl-Zebul, was already naturalized in Thessalia and the Morean peninsula, as Asklépios (Æsculapius), the son of Apolló; and he presently became the patron god of healing among all Greek-speaking people. He was worshipped with secret rites at Triakka in Thessaly, at Kôs, at Knidos in Asia Minor, and in many parts of Greece, but especially at Epidavros; so that more than one legend has sprung up* respecting his adventures. (GROTE).

The symbols and images of Æsculapius were duly subjected, as far as practicable, to the manipulations of Hellenic art. The squat figure peculiar to him in his earlier character as one of the Kabeirian gods of Egypt, and the composite symbolic forms employed in other Asian countries, were changed to more symmetric human shapes. We find him accordingly represented somewhat like his counterparts, the Eastern Bacchus and the Kretan Zeus. Of course the serpent and often the dog were retained; without the sacred animal the delineation would not be complete. A dwarf figure like at that Samothrakia, however, was kept in a hidden recess. On the coins of Epidavros, he was exhibited as an infant nursed by the goat and guarded by the dog. At Korinth and several other places he had the figure of a child holding in one hand the sceptre, and in the other a fir-cone after the manner of the Assyrian worship. He was also depicted as a man of mature years, bald, with a flowing beard, and partly covered by his robe, holding the knotted magic staff encircled by the serpent. Sometimes the animal was coiled in the form of a bowl as though to represent the mystic cup of Hygeia. Not unfrequently he was

* Herodotus declares that the Greeks reckon the nativity of gods from the time when the first knowledge of them was acquired in Greece.

represented by the serpent alone, and in every Asklépion a living serpent was maintained as his simulacrum.

The Hieron or holy precinct at Epidavros was long the most famous. It contained a sanctuary, a park or sacred grove, and a theatre capable of holding twelve thousand spectators. Kós, however, was more honored at a subsequent period. Pergamos, the mountain-city of Asia minor, was also famous for its Asklépion, as well as its great library and school of learning. The symbol of the god was a metallic serpent twined upon a pole like the brazen serpent of the Book of *Numbers*. At the various temples the Asklépia or festivals of the god were celebrated ; and his priests, the Asklépiads, presided at the altars and initiations.

The temples were thronged with the sick as well as with worshippers. Only the initiated, however, might enter the sacred precinct, except by permission of the superintending priest. This was granted on condition of undergoing a religious purification, or in other words, the preliminary initiations. Fasting, abstinence from wine, and bathing were strictly enjoined. Mesmerism and massage were among the chief agencies depended upon. Sleep-houses were always provided and great diligence employed to ascertain whether the patients, when in the hypnotic or clairvoyant condition, had received any suggestion in regard to their treatment. The medicinal means generally consisted of roots, herbs and a careful regimen, together with the various ceremonies, incantations and other magic observances.

It was not attempted, however, to cure persons thoroughly diseased. "Asklépios did not think," Plato informs us, "that a man ought not to be cured,

who could not live in the ordinary course, as in that case he would be of no service." Incurables were carefully excluded from the temples. It was usual when a sick person failed of recovery, to lay the blame upon him instead of upon the treatment. The priest-physician declared to him that his unbelief and sins were the cause of failure, or else some ordinance of fate.

The priests of Æsculapius, the Asklépiads, took sole charge of everything relating to his temples. They were hereditary orders, professing to be lineal descendants of the divinity. Even the Romans, when they imported this worship, established the gens of Acilius as the lineage of the god. It was asserted that they possessed occult knowledge imparted by Æsculapius himself. Parents communicated the art to their children, but to impart to any one not of the race and duly initiated was regarded as an act of impiety. "The holy word may only be revealed to the initiated" was the law recorded by Hippokrates; "the profane may not receive it before initiation." The traditionary form of the oath contains an execration of short life, calamity and opprobrium, if the candidate should profane or popularize the knowledge by revealing it to anyone except the children of his teachers, and disciples obligated by this oath and stipulation, according to the laws of the medical caste.

It has been thought by some that the Asklépiads were not members of the sacerdotal order. The fact, however, that they had, like other priesthoods, rites of their own and occult doctrines for the initiated, is enough to set that question at rest. Greece had not in the historic period a caste of priests like Asiatic countries; but none the less there were ministrants at

the various shrines, and they professed, as at Eleusis, to receive their authority by hereditary descent from the first attendants at the worship of the divinity. The Asklépiads were the traditional sons of Æsculapius, and constituted a special class, officiating at the sanctuaries of the divinity and obligated to preserve intact his mysteries.

Their maintenance was derived from the bounty of their patrons. While in later days the iatrists were paid by salaries and stipulated compensations, the Asklepia were supported by the munificence of the grateful. Presents and honoraria were bestowed, sometimes as offerings to the god and sometimes more directly to his priests: it was all the same. Sometimes patients in the sleeping halls, who had not been successfully hypnotized, beheld the proxies of the divinity in the act of gathering the votive offerings in a bag. Next day, however, it was announced that Æsculapius had borne them away in person. A cock was the usual sacrifice, sometimes a goat, but vessels of gold and silver, paintings and works of art, facsimiles of the parts of the body that had been diseased, of more or less valuable material, were common. Aristides sent to the temple at Pergamos a silver tripod with images upon it to represent Æsculapius himself, Hygieia and the dwarf-simulacrum, Telesphoros, the symbolic figure of the secret rites. In later centuries, the treasuries of these shrines tempted the cupidity of conquering generals. Sylla, the Roman consul, emptied the coffers at Epidavros to obtain money for the war against Mithradates. Pergamos was also compelled to submit to heavy contributions.

A practice of these sanctuaries consisted in the

inscribing upon tablets the name and history of every sick patient, and an account of the disease, mode of treatment and remedies employed. It was also customary to engrave the name and description of remedies, particularly of those more recently discovered, upon the door-posts and columns of the temple-hospitals. One man left on record an antidote for the poison of venomous serpents; another, a goldsmith, bequeated to the Asklépion at Ephesos the formula of a lotion for the eyes for sufferers who had been abandoned by human aid. Surgical instruments were also presented; Eristratos offered an instrument for the extraction of teeth.

Rome having been for centuries without a caste or profession of physicians, sent an embassy about three centuries before the present era to Epidavros to bring away the Æsculapius to Rome. The legend describes a serpent as making his way from the temple to the city, going aboard the Roman galley, and debarking at an island in the river Tiber, where a temple was at once consecrated to his worship. A company of Asklépiads accompanied the expedition to the new sanctuary. The shrine was greatly celebrated and the Emperor Claudius decreed that all slaves healed at the place should become free. Pliny, Ælianus and Galen have recorded some of the curative agents employed.

The Asklépiads continued in existence till the subversion of the ancient worship. The temple of Knidos was closed by the Emperor Constantine. There is a tradition also that St. Hilarios destroyed the Æsculapian serpent at Epidavros. As the legends of the period abound with stories of Christian missionaries destroying serpents, we need only include this with the others, alike fictitious and alike enigmatic.

The medical art, however, did not remain through this period confined to a privileged and protected class. The seventh, and more particularly the sixth century, before the present era, were characterized by a general unrest, and by great political and even religious changes. The Pelasgic predominance generally came to an end in Greece; the old dynasties were superseded by other forms of government; new divinities and modes of worship were introduced; schools of philosophy came into existence, and everything exemplified the advancing trend of thought. The sacerdotal class was made subordinate; human sacrifices were generally discontinued; and religion became not only mantic and enthusiastic, but popularized. The healing art participated in the revolution. It was taught in the schools of philosophy, at first under the old obligation of secrecy, but with the dissolution of the Pythagorean brotherhood, its arcane, medical as well as scientific, were made public. *Iatreia* or hospitals were established in the principal Grecian states, and physicians appointed by the government to take charge of them. These employed slave-doctors to attend to those of their own class, while they themselves cared for those in better circumstances.

In the more liberal atmosphere of the colonies, Magna Græcia, Sicily and Kyrené, philosophic learning enjoyed freedom and opportunity beyond what existed in Greece and Asia Minor. Xenophanes accordingly established his school in Sicily, and Pythagoras another at Krotôn in Italy. For more than two centuries, the medical practitioners from the colonies surpassed those from the schools of the Asklépiads of Kôs and Knidos, in reputation and professional skill.

DEMOKÉDES.

Herodotus has related the story of Demokédes, with the circumstance and embellishment of a tale in the *Thousand and One Nights.* It illustrates the changes that were taking place. Demokédes was a native of Krotôn, and during his youth had prosecuted the study of medicine. Unwilling to endure the severe temper of his father, he left Italy and sailed to Ægina. Here he began the practice of his art; and although destitute of instruments and other necessary appliances, he quickly surpassed the best-skilled physicians of the place. The next year, the commonwealth appointed him *archiatrist* or State-physician, at the salary of a talent—about $1,200. The year after the Athenians secured him at a higher price—$2,000, and the fourth year, Polykrates, the monarch of Samos, engaged him for two talents. "It was in no small measure from his success," says Herodotus, "that the Krotônians came to be reckoned such good physicians; for about this period the physicians of Krotôn had the name of being the best, and those of Kyrené, the second best in all Greece."

Polykrates was afterward treacherously murdered by the Persian satrap Orœtes, and those who accompanied him were consigned to slavery. Of this number was the physician. Dareios Hystaspis having succeeded to the throne of Persia, commanded Orœtes to be put to death. His property, including slaves and treasures, were brought to Susa.

The Persian kings at this time, kept Egyptian physicians at their court, as well as magicians and native practitioners. One day Dareios leaped from his horse, while hunting, and dislocated his foot. The Egyp-

tians were unable to relieve him, and for a week he was sleepless from the pain. Some one then told him of Demokédes, who was immediately brought to him, fettered and in the dress of a slave. The Greek feared that if he should make known his skill and perform a successful operation, he would be detained in captivity. In the ancient belief, before philosophy had changed it, banishment from one's country was regarded as equivalent to capital punishment. Even Sokrates chose instead to drink the hemlock. Accordingly Demokédes pretended to be totally ignorant of surgery. The king sent for officers to come with scourges and pricking-irons. The Greek hesitated no longer. He first proceeded by the use of appropriate remedies to alleviate the pain; and after the king had become recruited by sleep, he reduced the dislocation and succeeded in restoring the limb to its normal state.

The king had despaired of a cure, and in his joy conferred every honor upon the physician. Demokédes was introduced to the Sultanas as the preserver of the king. Each of them presented him with a plate heaped with gold coin. A slave became rich by picking up the pieces that dropped. He was also promoted to the post of royal physician, and admitted to the honor of sitting at the royal table. No man stood so high in favor. Dareios had commanded that the unskillful Egyptians should be impaled on the stauros, but at his entreaty spared their lives. When, however, his own wishes stood in the way, he was less generous.

CURING A CANCER.

"Moreover," says Herodotus, "it happened that Atossa [Hadassah?] the daughter of Cyrus who was married to Dareios, had a boil form upon her breast,

which after it burst, began to spread and increase. Now as long as the sore was of no great size, she hid it through shame, and made no mention of it to any one, but when it became worse, she sent at last for Demokédes, and showed it to him. Demokédes said he could make her well, but she must first promise him, with an oath, that if he cured her she would grant him whatever request he might prefer. On these terms he applied his art and soon cured the abscess."

Atossa not only recovered perfectly but became the mother of Xerxes and several other children, outliving her husband and exercising great influence in the reign of her son.

Demokédes had entreated permission to return home. Knowing, however, that the Persian king would not grant the request, he instructed the queen to propose the conquering of Greece. At her suggestion, he was sent by Dareios with an expedition to make a preliminary survey, and on arriving at Tarentum, succeeded in effecting his escape. He returned at once to Krotôn, and married the daughter of Milo the famous athlete and disciple of Pythagoras.

Herodotus probably received this account after he had become a resident of Italy, from the family of the physician. It may have been exaggerated. Dareios, certainly made no attempt against Greece till he had first invaded the country north of the Danube. It is true, however, that from that time Greek physicians were kept at the Persian court.

EMINENT TEACHERS OF MEDICINE.

The early philosophers made medical lore a part of their knowledge. Pythagoras had acquired it with the other mystic learning of the Egyptian priests. He

seems to have given the preference to external medication, but many of his followers were skillful in the treatment of internal diseases. Alkmæon, who was a disciple at the school of Krotôn, afterward gained a high reputation as a philosopher and naturalist. He possessed a considerable knowledge of anatomy, and wrote several medical works. His treatise upon human physiology was supposed to be the most ancient of which we have any knowledge.

Empedokles of Sicily was also a student of the Pythagorean school, and displayed such skill in the healing art that many believed his powers to be superhuman. It was declared that he restored a woman to life who had lain thirty days apparently dead; that he arrested a pestilence by turning the waters through a stagnant marsh; and that he delivered a district from the ravages of sirocco by closing up a passage between two mountains. He believed that races of living animals, under favorable conditions, would spring up even from the earth.

Akron, the fellow-townsman of Empedokles, was held by that philosopher in utter detestation. He seems to have been a kind of Aristophanes, and to have attempted to cast ridicule upon the writings of the sage. He has been regarded by many as the founder of the school of *Empiric physicians*, but this claim is somewhat premature. He was, however, a *periodentes*, or visiting physician, making stated calls upon his patients, in order to observe their symptoms and treat them accordingly. He visited Athens at the time of the great plague, and by causing fires to be built near the sick and in unwholesome places, greatly benefited many. He was the author of several medical works that were highly esteemed.

Anaxagoras of Klazomenæ, the friend of Perikles, was also distinguished for the profoundness of his speculations, and his superior attainments in physical science. His views upon medicine and human physiology, however, are widely at variance with those developed in later times.

Demokritos of Abdera appears to have had much to do with the moulding of subsequent opinions. He was an indefatigable student, and accomplished in the learning of his age, religious, philosophic and scientific. His countrymen having entertained Xerxes on his return from Greece, the king bestowed upon them royal honors, and left several Mazdean teachers to instruct them in the Oriental learning and doctrines.* The young Demokritos was among their disciples. His father dying, he was left in the possession of a rich patrimony, which he at once devoted to the acquiring of knowledge. He travelled from country to country, to Italy, Egypt and the East, listened to the teachers of philosophy, and finally returned home a master in all departments of learning. He became himself a teacher, introducing new concepts of natural law and operation, as well as of the virtues and properties of medicinal plants and various mineral bodies. He gave a new impulse to research in every field.

MEDICAL PRACTICE AT ATHENS.

As has been already shown, there were several classes of physicians in Athens. The Republic took care to provide that every one should receive needed medical attention. The Pæonion at the Peiræus and the Asklépion in the city were time-honored sanctuaries, which were frequented by patients of noble

* Dareios was a propagandist of the worship of Ahura Mazda in his dominions.

birth, and others who had been admitted to the worship of Æsculapius. In addition there were the *iatreia* or dispensaries for the commonalty and slave population. These were in charge of the public physicians, appointed by the Ekklesia or General Assembly of the people. Demokédes held the office a year in the time of the Peisistratidæ, but under the commonwealth the number of these physicians appears to have increased. After the Persian invasion Athens had a larger population, and doubtless the imperfect sanitary regulations, and the Great Plague in the time of Perikles, made more extensive provision for gratuitous medical treatment necessary.

Plato decried severely the demand for these institutions. "Numerous law-courts and dispensaries are necessary," he said, "because insubordination and diseases have multiplied in the commonwealth. Can you adduce any greater proof of bad and shameful training," he demands, "than the fact of needing physicians and presiding magistrates—and these, too, not only for craftsmen of the lower classes, but also for those who boast of having been well brought up? * * * And to need the art of medicine, not on account of wounds or some epidemic complaint, but because of sloth and luxurious feeding,—being distended with rheum and flatulence like lakes, and obliging the scholarly Asklépiads to invent new names for the diseases, such as dropsies and catarrhs—do you not think this abominable?"

The philosopher was conservative in his views far beyond what would be tolerated at the present time. He was himself carefully instructed in the art of medicine, as it was taught at Krotôn and Kyrené, and was thoroughly familiar with the learning of the Ask-

lépiads. "Before the time of Herodikos," he remarks, "the Asklépiads did not practice the methods now in use, of putting the patient on a regimen. Herodikos, being a teacher of young men, and himself in weak health, devised a skillful combination of gymnastics and medicine, which served first to render himself very uncomfortable, and afterward many others besides. He succeeded in procuring for himself a lingering death. He was constantly attending to his disease, which was mortal, and therefore impossible to cure. He neglected everything else, that he might employ constant medical treatment, and was always in trouble if he departed in the least from his usual diet. Thus he passed his life, engaged in a long struggle with death, and succeeded by this peculiar skill of his in arriving at old age."

Æsculapius himself, the philosopher declares, regarded these matters in a far different light. He treated those only that were still virtually sound but chanced to be afflicted by some incidental complaint. For them he prescribed medicine, but ordered no change of the usual diet. But systems thoroughly diseased, he did not attempt to cure. He did not think that a man who could not live in the ordinary course ought to be cured, as he would be of no service to himself or to the community.

A description of the practitioners may be of interest. "There are two kinds of physicians, the gentler and the ruder, and two modes of medicating," he remarks, "In other words, there are physicians, and their assistants; but somehow we call the latter class physicians likewise. Whether these assistants are free men or slaves, they acquire their knowledge of the art empirically from obeying their masters and observing

their methods. With the others the art is a hereditary possession, and is taught as such by free men to their children." "From childhood upward, while learning their art, they gain experience from a large number of patients, and these of a very sickly character. They do this the more thoroughly, if they are themselves afflicted with all kind of maladies, and are not altogether of a healthy constitution. It is not by the body however, that they cure the body," he adds; "but they cure the body by the soul, and if this is in a disordered condition, it is incapable of accomplishing any cure whatever."

The slave-doctors were employed to do the most unattractive part of the work. They waited upon the callers at the dispensaries, or went from one house to another to prescribe for sick domestics. "A physician of this class," Plato remarks, "never talks to his patients individually or lets them talk about their individual complaints. He prescribes as he sees fit, as though he knew everything about the case; gives orders after the manner of a tyrant, and then hurries away to another of his sick patients." On the other hand, a free-born practitioner discourses with a free-born patient, making use of speculations of a philosophic character, describing the disorder from its very commencement, together with its pathology, and illustrating the subject by comparison with other cases. "If," says Plato, "during such a discussion, one of these physicians who practice medicine empirically, knowing nothing of speculative research, should encounter such a practitioner, he would burst into laughter and speak to him in no other language than is ready to be uttered to the majority of the so-called physicians. He would say: 'You stupid dolt! you

are not treating the sick patient, but are imparting to him instruction, almost as though he was desiring to become a physician and not to be in health.'"

From this time onward to the later centuries, the history of medicine comprises the doctrines of great teachers, and the exploits and rivalries of the various schools and parties.

HIPPOKRATES.

Philosophic speculation had led to the development of new views in all the principal fields of thought. So long as the teachers exhibited an external assimilation to the general sentiment of the commonalty, they could enjoy the utmost liberty of belief in their schools and private discussions, apart from the public. In this way various opinions were considered, and eventually great changes and even revolutions accomplished.

Among the eminent men of that time, Hippokrates has always held a prominent rank. Partly from native genius, but likewise from assiduous study and broad culture, he became illustrious in his own age, and his reputation extended through the centuries after him.

It is not easy, probably it is not necessary, to ascertain to what extent Hippokrates was an innovator, or the introducer of novel doctrines. He was a member of the medical caste, that claimed Æsculapius himself, for their eponymous hero-ancestor. Like other Asklépiads he was instructed at the temple-school of Kôs, an island in the Myrtoan Sea, colonized from Epidavros. He next sojourned at Athens, where he became a student of Herodikos of Selymbria, and attended the lectures of the most distinguished sophists. He afterward returned to Kôs, where he remained till the death of his father. During this period he is said to have

made copies of the tablets and book-rolls in the Asklépia at Kôs and Knidos; and a scandal set afloat in later centuries imputed to him the burning of those collections, in order that he might supersede them by his own compilations. The honors paid to him in later days by his fellow-citizens, as well as the privileges granted by Athens to Kôs on his account, would seem to be a sufficient refutation.

Hippokrates, like other ancient philosophers, traveled over many different countries, sojourning at places where epidemics were raging, and observing their progress and characteristics. In this way he remained with Demokritos at Abdera, when that city was suffering with a pestilential visitation. He was also at Athens during a great plague, which he is said to have arrested. Plato speaks of him as teaching medicine. The Persian king, Artaxerxes Mnêmón, attempted after the manner common at that court, to procure his services, offering him splendid presents, and threatening war against Kôs, in case he should not be delivered up. Finally, he established himself in Thessalia, a country famous ever since the days of Kheiron for medical and "magical" knowledge.

Hippokrates achieved the distinction, which he has since retained in medicine, by creating for it a literature. This made him and his art immortal. He was a hero, not merely of the hour but of the ages. Whether he struck out any new field of knowledge or observation, is not a matter of certainty. His greatness consisted in his rare success in gathering up what was known, tracing its resemblances and analyzing its differences, and so combining all into a rational method.

He was a philosopher, and while personally familiar with the principal sages of his time, hesitated not to elaborate and propound his own dogmas. He was profoundly religious, but he did not have that blind veneration for things esteemed divine, which hindered him from investigation into the nature and condition of physical occurrences. All causes, he believed, were of divine agency, but their operation was directed by constant laws and natural conditions. To explore them, with a view to remedy evils and benefit mankind, was therefore not only lawful but a work of the highest merit.

The Hippokratian school of medicine bore the designation of *dogmatic*, or philosophic; as teaching and practicing in accordance with a general principle, and not empirically. It placed the art upon a basis so firm that later teachers have generally imitated and modified what was set forth, rather than venture upon new fields of enquiry.

Whether the obligation of secrecy was maintained with the former strictness, is questionable. The maxim has been imputed to Hippokrates: "Sacred knowledge may be communicated only to the initiated; the profane may not be taught before their initiation." This, however, was the imperative rule before he was born. It was accounted sacrilege for any to intrude upon a priestly function. He was certain to meet the fate of Korah, Uzzah and King Uzziah. It is certain that Pythagoras, himself obligated in Egypt, initiated all his disciples. But that there was any genuine "Hippocratic oath," apart from the usual sacerdotal requirement, is preposterous. The attempt was made in later centuries, to impose such an obligation upon medical students, but it was a failure. The Pythago-

rean fraternity had dissolved while Hippokrates was still a young man, and its members had made public its learning, medical as well as metaphysical, astronomic and mathematic. What Plato stated in regard to the methods of Herodikos and the Asklépiads, would seem to indicate that no obligation of secrecy was then in existence.

Several endeavors have been made to ascertain and classify the works of Hippokrates. The success has, however, been problematic. It was the ancient practice for unknown authors to ascribe their works to famous individuals who had lived before; and for imitators and copyists to insert their own utterances into the texts of authors. The earlier periods of the present era abound with such literature. Mercurialis of Padua attempted the task, three centuries ago, making four categories: 1. Works distinctly Hippocratic, being in the Doric language and "manifestly authentic." 2. Works of Hippokrates published by his sons and disciples. 3. Works written by others, accordant with his doctrines and ascribed to him. 4. Works not in accord with his doctrines, but imputed to him. Louis de Lemas of Portugal, writing about the same time, rejected all but nineteen of these works as spurious. Haller, however, would accept but fifteen as genuine. Gruner threw all but ten; and Grimm makes the number still less. Professor Link of Berlin is still more iconoclastic, and declares that the *Works of Hippokrates*, as they are called, are but a collection of treatises by different authors living before the establishment of the school of Alexandria.

Doubtless, however, enough of his genuine writings were extant at that time to enable his doctrines to be very generally known. It is acknowledged that his

views outstripped those entertained in succeeding ages. Galen credits him with the knowledge of scientific anatomy, and asserts that the Asklépiads generally were proficient. He was skillful in diagnosis and in the art of prognosticating. His observations upon "critical days" and the crises themselves are remarkable for their acuteness and accuracy. He was a careful uroscopist, and particular in noting the sputa, coating of the tongue, evacuations,—also the general appearances, the cast of the eyes, the increase or diminution of bulk, the breathing, mental condition and phenomena. In acute disorders, he made great dependence upon cooling drinks to further the natural reparative action. He prescribed total abstinence from food while a disorder was on the increase, and especially at the critical period, and a spare diet on other occasions. Yet at the same time he required strict attention to the constitution as well as the habits of the patient in regard to food and drink. He discouraged rapid changes in habits and manner of living. Excesses of all kinds were dangerous, and every bodily function ought never to transgress the limits marked out by nature. Those in health should abstain, he said, from all kinds of medicine. He declared cathartics to be the medicine most difficult for individuals to bear. He also disapproved too strict a regimen, as being more hurtful to a person in health than a freer mode of living. In this respect, or in others, it will be seen that he sets aside the methods of his teacher, Herodikos, and adheres to the older Æsculapian notion.

The physician, he taught, should always observe carefully and assist as he best was able the processes of nature. His was the maxim: "*Nature is the first of physicians.*" He was very careful not to interfere with

what he considered reparative efforts, but on the other hand endeavored to promote them. If they seemed to him insufficient he stimulated them, and if in excess, he sought to moderate them.

In the works ascribed to him, he is credited with a Materia Medica of at least 586 different remedial agents—36 mineral, 300 vegetable, and 150 animal substances. His mineral remedies included alum and several salts of lead and copper. The vegetable pharmacopæia embraced the white veratrum, laurel, euphorbia, carthamos, elder, chenopodium, wild parsley, etc. He seems also to have made great use of honey and honeycomb, and figs were also highly prized.

Considering the time and circumstances, Hippokrates appears to have possessed a very proficient knowledge of surgery. He was skillful in the use of bandages, and judicious in his treatment of fractures. He devised several kinds of apparatus for curvature, and the reducing of luxations; and employed instruments like the trephine for injuries of the head. Another maxim attributed to him was certainly much affected by later practitioners: "Those complaints which medicine will not cure, iron will cure; what iron will not cure, fire will cure; and what fire will not cure are incurable."

Hippokrates did not reject philosophy or its methods. His early relations with the sophists and with Demokritos, appear to have colored all his beliefs. He was also more or less in harmony with Pythagoras and the physical doctrines of Herakleitos, and he religiously accepted the notion of supernal agency in all visible operations. He considered it the proper task of the enquirer to find out the laws and conditions

by which the agency of the divine beings was determined and according to which it might be foretold. He also adopted with implicit confidence the old belief in magical divination, prophetic dreams and clairvoyance. Familiar as he was with the temple-sleep of the Asklépia, it was natural that he should fully concur in these prevailing opinions. "Even when the eyes are closed," says he, "the soul sees everything that goes forward in the body." Again, he is explicit: "When the soul has been freed by sleep from the more material bondage of the body it retires within itself, as into a haven, where it is safe against storms. It perceives and understands everything that is going on around it, and represents this condition as if with various colors and forms, and explains clearly the condition of the body."

But the fame of Hippokrates is not founded on any of the specific doctrines imputed to him. He was great because of his breadth of knowledge, and because he made that knowledge accessible to those who came after him, without partiality and for the benefit of all.

KTESIAS.

The example of Demokédes was often repeated. "How many there are," says Sokrates, "whom the King of Persia has caused to be carried away and still keeps near him, merely on account of their talents, are now languishing in perpetual bondage." We have observed that Hippokrates was able to keep himself aloof, although it involved his countrymen in peril. Ktesias, of the rival school at Knidos, was conducted to Susa and made court physician. He belonged to the suite of Parysatis the queen-mother, and treated Artaxerxes Mnêmón for his wounds received at the

battle of Kunaxa. Having access to the archives of the Empire, he compiled histories of Persia, India and Assyria, all of which are lost. It is known, however, that he criticised and often disputed the statements of Herodotus. He added nothing to the literature of his order, doubtless observing the oath of secrecy.

ARISTOTLE.

The philosopher Aristotle was also a member of an Æsculapian family. His father, Nikomakhos, had been the physician of King Amyntas, the father of the celebrated Philip, and was the author of several works on Medicine and Natural History. Both parents of Aristotle died while he was young, and he became the ward and pupil of Proxenos of Mysia, whom he afterward recompensed like a true Asklépiad by adopting and educating his son. At the age of seventeen he went to Athens, where he remained twenty years. He was at first a student of Plato at the Akadémeia, but afterward devoted himself to the branches of knowledge which should fit him for the labors of his life. After the death of Plato he left Athens and became the tutor of Alexander. At his instance, this prince employed several thousand collectors in Europe, Asia and India to procure animals and specimens for his studies. It was declared hyperbolically that an amount of money equivalent to $800,000 was expended for this purpose. Aristotle, working with his usual energy, made dissections and kept notes of his observations, adding a multitude of important discoveries to medicine and the accessory sciences. He compiled fifty books upon comparative anatomy and natural history, illustrating them with anatomical drawings. None

of them, however, have reached us. He also quarrelled with his royal disciple, who, however, did not withhold assistance to his labors. Returning to Athens, Aristotle opened a School of Philosophy at the Lykeion (*Lyceum*) where he lectured thirteen years. Though less profound than Plato, and of a more scientific tendency, his numerous literary productions made him the principal leader of philosophic thought in Europe and the Muslim world for centuries.

THEOPHRASTOS.

Tyrtamos, the Lesbian, first a disciple of Plato, and afterward the favorite student of Aristotle, succeeded the latter as the head of the Peripatetic School. His superior eloquence and enunciation led his admirers to bestow upon him the name by which he is best known, *Theophrastos*, the divine instructor. The students thronging his lectures were numbered by thousands. Among them were Erasistratos and Nikomakhos. The latter was the son of Aristotle, who had made Theophrastos his guardian and preceptor. Theophrastos was a voluminous writer, composing not only various philosophic works, but likewise numerous treatises upon mineralogy and other subjects. His *History of Plants*, comprising nine books, was a complete system of botany, as it was then known. He also wrote upon medicine.

PRAXAGORAS.

Another distinguished Asklépiad, Praxagoras, of Kôs, added further to the vocabulary and literature of Grecian medical learning. He made the distinction between veins and arteries in the form which has since been accepted by medical men. One of his

notions gave intermittent fever its origin in the *vena cava*, and he taught that the heart was the origin of the ligaments of the body. He was a bold surgical operator, removing the uvula in cases of inflammation, and opening the abdomen in iliac passion, that he might restore the intestines to normal position.

CHRYSIPPOS.

Knidos in Karia, a colony from Epidavros, had also a famous temple-school. Ktesias, the historian of Persia, was from one of the Asklépiad families of that city. Chrysippos was also in high repute for his skill and erudition. He visited Egypt in the reign of Nekhtanebos for instruction from the priest-physicians. He would be considered even now as worthy to represent the advocates of safe and simple medication. He administered mild remedies and strenuously opposed all forms of depletion. Pupils in great numbers resorted to him, some of whom outshone their master.

ERASISTRATOS.

Erasistratos effected a revolution in the manner of studying medicine. He was the grandson of Aristotle, and inherited his passion for knowledge. He was a native of the island of Keos, a place remarkable for its custom under which the inhabitants at the age of sixty put an end to their existence by drinking hemlock. Sokrates seems to have been in sympathy with this practice; for while denying the right of voluntary suicide, he regarded his sentence to die as a not unwelcome exemption from the infirmities often incident to advancing age. Erasistratos became a pupil of Chrysippos at the temple-school of Knidos, and also

of Theophrastos. After spending several years in his native island, he accepted the appointment of court physician to Seleukos the Conqueror. He was engaged in charge of Prince Antiokhos (Soter) who was wasting away with an unknown disease, of which other physicians failed to guess the nature or the cause. Erasistratos perceived, by a peculiar quickening of the pulse whenever she appeared, that the prince was madly enamored of his father's wife, Stratoniké, and Seleukos was persuaded upon learning this to resign her to his son.

The later career of Erasistratos was associated with the establishing of the famous School of Philosophy and Science at Alexandria by Ptolemy Soter. He for a time engaged in the practice of medicine in that metropolis but afterward abandoned it to give exclusive attention to his duties as an instructor at the Musæum. He did not hesitate to depart from precedent, even to setting aside the doctrines of Hippokrates and the Dogmatists, and founding a school of his own.

He introduced new methods of teaching. Following the example of his master Chrysippos, he cut loose from Empiric precedent. He was the first writer that distinguished Surgery from Medicine in the healing art. He had, like others before him, confined his investigations to the dissecting of the bodies of animals; but now he set at nought the Hellenic prejudice, and engaged in dissections of the human body itself. To his explorations we are indebted for an explanation of the function of the brain and cerebro-spinal system, and the discovery of the lacteal vessels, and he appears likewise to have had some perception of the circulation of the blood. He taught the existence

of the *pneuma* or spiritual essence, and that it is inhaled with the breath and passes from the lungs to the arteries, becoming the vital principle of the body. Its normal movement sustained the health; while an obstruction in the veins, repelled the blood to the arteries, and became the cause of disease.

He reprobated the complicated formulas which were then common among physicians. Like his tutor, Chrysippos, whose procedures he largely adopted, he discountenanced blood-letting, and the use of cathartic medicines, depending upon the ligaturing of the limbs, simple if not specific remedies, emetics and enemas, with abstinence, to accomplish the desired ends. At the same time he was a bold surgeon, opening the abdomen in case of cancer, or abscess of the liver or spleen, in order to apply remedies. He thus held in turn the office of court physician in Syria, and archiatrist in other places, as well as teacher in the School at Alexandria. He finally returned to Asia Minor to spend the residue of his life. According to the practice of the times, he presented samples and models of his inventions at the temple of the Ephesian goddess Artemis.* Among them were a catheter and an instrument for extracting teeth.

THE GENERAL CHANGE OF SENTIMENT.

The healing art, thus far, had been almost exclusively associated with the religious orders, and remedies were applied with peculiar ceremonies, invocations, and other accompaniments. But philosophers were degenerating into skeptics, and religious influence waned. The traditions of Europe, the faith of Asia and the dogmas of Egypt had lost their influence.

* The Great Mother, "Diana of the Ephesians."

The former things were passing away, and all looked as if chaos had begun its reign. The learned cared little to know the the truth, but chose rather to dispute about it.

Nevertheless, with the policy introduced by Alexander and Seleukos, began a new era in the world. The disciple of Aristotle had been accompanied by men of learning to the remotest limit of his conquests; and his successors, in their enthusiasm, vied with each other in the promotion of knowledge and general literature. Every ancient country seems at this period to have begun the preparing of historic and religious books. A similar impulse, whether it existed in the air of the time or was imparted, was likewise experienced in the nations beyond the Indus. A new philosophy, a new worship, and a new literature were cultivated in the northern regions, extending southward, eastward and in every direction where the missionaries of King Asoka and his influence had penetrated.*

THE ALEXANDRIAN SCHOOL.

After the cordon against foreigners had been removed in the later years of the native monarchy, the temple-schools of Egypt became a resort for men of learning from other countries. The earlier philosophers, Thalés, Solon, Pythagoras and Xenophanes, all went thither for instruction; later came Demokritos, Plato, Chrysippos, Eudoxos. After the accession of Ptolemy, himself a scholar and author, the new city of Alexandria succeeded, as a centre of learning, to the ancient cities of Heliopolis, Memphis and Thebes.

* The philosophy of Bakkheios, and some say of the Zoroasters.

The *Museion* was the World's University. Every facility for students was afforded. There was a hall where the teachers dined, with corridors for lectures and a theatre for lectures and discussions after the Socratic method. Attached to it was the Botanic Garden, filled with medicinal and exotic plants, and collections of wild beasts and rare birds; and there were also rooms where hundreds of scribes were employed at preparing papyrus, copying books, writing from dictation and arranging the scrolls in their proper order. "No doubt," remarks Winwood Reade, "most of the Museum professors were narrow-minded pedants; . . . no doubt much of the astronomy was astrological, much of the medicine was magical, and much of the chemistry was alchemical. . . . Yet with all this it should be remembered that from Alexandria came the science which the Arabs restored to Europe, with some additions from the Crusades."

Medical knowledge speedily became prominent, Herophilos of Kalkhedonia, an Asklépiad and disciple of Praxagoras, was the first teacher. He was a zealous anatomist, actually dissecting seven hundred human corpses, and as Celsus declares, even opening the bodies of living criminals in order to witness the phenomena and if possible learn the origin of life. He was the founder of pathologic anatomy, and the first who instituted necropsy as a means to discover the causes of death. His writings were numerous, but with the exception of a commentary upon the *Aphorisms* of Hippokrates, now in Milan, they have been lost; and our principal knowledge of his achievements and discoveries is obtained through the works of his most famous successor. He is accredited with having

defined the functions of the nervous system, described the structure and appendages of the brain, explained the structure of the eye and pointed out the divisions of the intestinal canal, the vessels of the mesentery, etc. Following out the instructions of Praxagoras, he delineated the pulsation of the arteries, making it the basis of an extended theory of symptomatology, diagnostic and prognostic. Unlike his rival, Erasistratos, he used blood-letting, and used drugs extensively. There were two parties as a result, but that of Erasistratos finally won the field.

As had been the practice at the temples, the oath of secrecy was administered to students, and for a time was successful in the purpose of keeping professional knowledge away from others. The times, however, were becoming too liberal, and scholars too latitudinarian. For a time women were forbidden to practice obstetrics, and practitioners interdicted from lithotomy, which was left to specialists. There were many improvements in surgical apparatus. Xenophon of Kôs applied the ligature to arrest hæmorrhage; Ammonios invented lithotrity; Nileos constructed the plinthion, a square box with pulleys, to be used in the reduction of luxations of the humerus; Nymphodoros devised a fracture-box for the extremities; Amyntas of Rhodes was the author of a bandage for fractures of the nose; Perigines also of one for dislocation of the shoulder, etc.

Zeuxis, a disciple of Herophilos, established a school of medicine in Phrygia, which continued in existence for many years. The leading physicians belonging to it bore the designation of *Philalethes*, or lovers of truth. They are named by Galen with great commendation.

THE EMPIRIC SCHOOL.

Philinos, of Kôs, belonged to an Æsculapian family and for a time was the disciple of Herophilos. Instead, however, of adhering to the methods and speculations of that school, he rejected the innovations, and particularly the introduction of anatomy as a necessary branch of medical study. The practice of medicine, he inculcated, to be certain and most likely to be beneficial, should be based upon personal observation (*autopsia*) and experience (*empeiria*). Serapion, of Alexandria, afterward expanded these views to a broader range, and made them more definite and applicable. He wrote against Hippokrates and his methods with great severity, while confining himself almost exclusively to researches in Materia Medica, pharmacy, practice of medicine and surgery. The new sect, denominated from its methods, *Empeirikoi* or Empiricists, paid little attention to the causes of disease, but attached the chief importance to symptoms. The physician having observed the same cases at different times under similar conditions, was careful to discriminate between those deserving consideration and those which were trivial; and thus, by comparison with other cases and other means of information, was able to form definite conclusions of great accuracy.

Although the name of this school of practitioners is employed as a term of opprobrium for dissenting physicians, its methods and doctrines are held in esteem. It continued to exist over the principal countries of the Greek and Roman world from the time of the earlier Ptolemies till its virtual supersedure by the Galenists. It had many able men in its ranks, such as Hérakleides, of Tarentum; Bakkheios, of Tanagra;

Glaukias and Menodotos, of Nikomedia. One of the most prolific writers was Nikandros, of Kolophon. He spent some years at Alexandria, but afterward became an admirer of the scholarly King Attalos Philomêtor of Pergamos. At the death of his father he succeeded him as high priest of the oracle-temple of Apollo at Klaros. He wrote two poems upon poisons and their antidotes, which appear to have possessed much merit. Menodotos is a writer characterized by furious invective. He always wrote of his adversaries the Dogmatists, with fierce epithets, as *tribonikoi, drimuleontes drimumoroi* cloak-wearers (in imitation of philosophers), fierce lions, furious fools. It seems to have been a stain upon the medical profession, that many of its members disdained the amenities and courtesies, not to mention also the common justice and fair dealing, which are the indexes of erudition, good breeding and refinement.

PERGAMOS.

For a time the school and library of Pergamos rivalled those of Alexandria. It is said that after the Persian conquest of Babylon, many of the priests and literati emigrated thither. At the division of the realm of Alexander it became a place of great importance. Eumenes II. founded the library, and 200,000 books were collected. Ptolemy Evergetes (Physkon) desiring to cripple this enterprise, forbade the exportation of papyrus, which compelled the resort to vellum and parchment. Antony afterward presented the entire collection to Kleopátra, to begin anew the library at the Serapion. Attalos, the son of Eumenes, was passionately devoted to botany, and cultivated the well-known medicinal and poisonous

plants, henbane, aconite, hemlock and veratrum. He devised also various medical formulas and was skillful in metallurgy. At his death, bequeathing his goods to the Roman people, the Senate interpreted the legacy as comprising the kingdom, and accordingly annexed it to the Empire.

The reputation of Pergamos as a seat of learning, continued during the Roman period. The temple of Æsculapius was famous, and throngs of invalids resorted to it for treatment. There was a mineral spring at the place, as there also was at other Asklépia. The same means were employed in treatment as elsewhere —fasting, bathing, musical incantation, the temple-sleep, medicines and regimen. The Asians and Assyrians believed that there were seven spirits or dæmons that obsessed and disordered mankind, as in the case of Mary, the magdalen or temple-girl; and music was a powerful charm for exorcism. The "witch-herbs," poppy, hemp, belladonna and aconite were well known and much used. Oracles and oracular dreams were much depended upon for directions. The Emperor, Caracalla, was a patient there in 215, but to no good purpose. Patients who were healed used to make votive offerings and rich presents to Æsculapius, and his priests were as zealous as those of Bel-Merodakh at Babylon, in disposing of the benefactions.

HEBREW MEDICINE.

The Hebrew sacred books recognize the healing art as distinctly a prerogative of the sacerdotal class. Houses supposed to contain infection were to be inspected by the priest-physician; and the person recovering from contagious disease was prohibited from

going abroad from his residence till he had first been examined professionally and permitted. The Levitical law was very rigid in the matter. Even King Asa was regarded as delinquent, because, when having a disease that ultimately proved mortal, he "sought not to the Lord" and his representative priests,* but among Rephaim or "physicians." Yet several of the prophets, writing centuries before the *Chronicles* were compiled, describe medical matters in Judæa as like those of other countries. In the *Lamentations* is found a pitiful pleading as of a sick person exposed in a public place for counsel: "Is it nothing to you, all ye passing by the way? Look attentively and see if there is any pain like my pain." And again in the prophesy of Jeremiah is a similar scene: "Thy wound is mortal; no one offereth his help for thy cure; no healing medicines (*rephath*) are applied." And again he demands: "Is there no balm in Gilead? is there no physician (*repha*) there?"

Ezekiel treats of the bandaging of a broken arm, and Isaiah of ointment for "wound and bruise and fresh smiting." The latter prophet prescribed for King Hezekiah when "sick unto death" from an ulcer or carbuncle, to apply to it a lump of dried figs spread like a plaster.

Later writers have described the Essenés or *healers*, a secret fraternity, identical, perhaps, with the Therapeutists of Egypt. The statements of Flavius Josephus, upon which we chiefly depend, are of course not to be implicitly accepted. They seem to have lived as communists, to have had a philosophy and literature of their own, to make medicine and divination a study, and so there was a discipline and an art of healing

* Compare, *Denteronomy*, xix., 17.

peculiar to their own number. Josephus says that they studied the medicinal properties of herbs and stones, and doubtless they acted as physicians to the poor. Perhaps from this practice they obtained their designation; but among themselves they recognized only a Master or episcopos, and called each other the Brethren.

Their origin is not known, and their end as a distinct people is unrecorded.

BUDDHISTIC INDIA.

Ab oriente Lux! Mention has already been made of the physicians and healing art of the Vedic and Brahmanic India. About the time of the death of Alexander, Nanda, the King of Magadha in northern India, had died, and soon after Sandrakottos or Chandra-Gupta became king and Lord Paramount of India. He established his royal abode at Pataliputra (Patna,) then the focus of Indian learning and refinement. He was a patron of the Jainas or Hindo Gnostics, and a prince of great ability. Seleukos sent the historian Megasthenes as a minister to his court, and to him we are indebted for having made the Occidental world of that period acquainted with the "Far East." He wrote a book describing scenes and matters that had come under his notice, and gave a description of the healing art as there taught and practiced, which corresponds very closely with its condition as it had existed in Greece. "Next in honor to the Shamans, or ascetic teachers," says he, "stand the physicians. They apply philosophy to the study of the entire nature of man; . . and they cure disease by diet, rather than by medicines."

Asoka, the grandson of Chandra-Gupta, was the most distinguished monarch of India. He had been a Jaina, and had abolished the death-penalty in his dominions. In the twenty-seventh year of his reign, he embraced the *dharma* or Buddhistic philosophy, and became zealous in its propaganda, sending out, it is said, eighty thousand missionaries to the different countries of Asia, and even to Greece and Egypt. Proselyting, nevertheless, was not the principal characteristic of his reign. He cared for his people, and even protected animals from cruel treatment. One of his rock-inscriptions contains this record: "In the whole dominion of King Priyadarsin (Asoka), the friend of God, as also in the adjacent countries, as far as Tamraparni, the realm of Antiokhos and his neighbor-kings, the system of caring for the sick, both of men and cattle, has been everywhere brought into practice; and at all places where useful healing herbs for men and cattle were wanting, he caused these to be brought and planted."

Asoka filled India with hospitals. He also established public dispensaries at the four principal gates of Pataliputra. Seven hundred years later, Fa-Hian, a Chinese traveller, visited India and found the hospital system of Asoka in full activity. "The nobles and land-owners have founded hospitals in every city," he declares. "In these the poor of all countries, the destitute, the crippled, the diseased, may repair for shelter. They receive every kind of requisite help gratuitously. Physicians inspect their diseases, and order for them, according to their cases, food and drink, decoctions and medicines—everything, in fact, which may contribute to their benefit. When cured, they depart at their own convenience."

In the year 648, twelve and a half centuries ago, Hiouen-thsang, another Chinese pilgrim, visited India and found the country abounding with hospitals, or "houses of doing good." He speaks of them as entertaining widows and orphans, and as making gratuitous distribution of food, drink and medicine to the poor and sick. Of these houses, where these beneficiaries were thus cared for, he declares that there was a multitude. Hospitality seems to have been carried out in the full sense of the term, *making guests* of "the poor, lame, halt and blind," who could give no recompense, as well as of the sick and injured that needed a physician.

PHYSICIANS IN ANCIENT ROME.

According to historians Rome for many centuries had no physicians. The earlier Romans held learning, philosophy and the arts in contempt. The only accomplishments prized by them were ability to fight and the tilling of the soil. Much as Cincinnatus is lauded for his simple life, while saving his country from foreign foes, he was all the same tenacious of the authority of the patricians and bitterly opposed to the equal rights of the commonality. In his view, then current with his order, plebeians had no country, no rights as citizens, no connubial relations, no religious worship. Servius Tullius had been murdered for endeavoring to extend to them these franchises, and the Roman Republic long and sternly withheld them.

Æsculapius, it is recorded, was brought to Rome in the year of the city 461, about three centuries before the present era. He was not, however, honored with a shrine inside the walls of the city. The Romans permitted the divinities of the subject-races to be

worshipped at home, and even by persons of those races at Rome, but they neither admitted those divinities into their own pantheon, or established the cultus of Roman gods among other peoples. The coming of the great son of the god Apollo to Rome was described in their annals in the style of a religious legend.

A pestilence was raging at Rome, and neither religious incantations, the employing of amulets, nor other means with which barbarous races are familiar, were sufficient to arrest its ravages. The oracles were consulted and the command given to invite the god Æsculapius for help. An embassy repaired to Epidavros and proceeded to the Asklépion, to supplicate the divinity. A serpent came forth, glided along the way to the city, and on reaching the harbor, went on board the principal galley, where it took up its quarters in the apartment of the chief ambassador. On arriving at the Tiber, it came upon the deck, and darted to the shore of the Holy Island, now San Bartolomea, where afterward a temple was erected and hospitals were established for the reception of patients. The advent of the divinity is said to have been followed by the cessation of the plague. There being no family of Asklépiads at Rome, the pontiffs fabled that the clan of Acilius, a plebeian stock, were lineal descendants of the god, and fixed his anniversary in the month of January.

The Roman patricians despised the physician's calling. They abhorred the class of men who made a trade of caring for the sick and enriched themselves from the misfortunes of others. Nor was it till the year 219 before the present era, that a surgeon, Archagathos, from the Peloponnesos, settled in Rome. The Roman people had got along without physicians, says

Pliny, "for a period of more than six hundred years—a people too, which has never shown itself slow to adopt all useful arts, and even welcomed the medical art with avidity until, after a fair experience, there was found ample reason to condemn it."

Archagathos had been joyfully welcomed to Rome and admitted to citizenship. The Senate had even appropriated public money to buy for him a house at which to receive his patients and care for them. He did not prescribe for internal maladies, but left them to be treated in the usual way by domestic prescriptions, incantations, amulets, and remedies suggested by the oracles. For a time he was popular enough; but as his methods consisted principally in cauterizing sores and cutting off limbs, admiration changed to disgust, and he became the object of general odium.

Pliny, who himself believed little in the profession of medicine, but more in oracles and simple home-remedies, has also preserved for us the denunciations of Cato the Censor. He held that all medical services ought to be gratuitously rendered. For this reason, he declared, the Romans, although they invited Æsculapius to Rome, placed his sanctuary outside of the city upon the island in the Tiber. Besides, he adds: "The race of Greeks is very vicious; and, my son, believe this as the voice of an oracle, that, with its literature, it will spoil everything at Rome. It will be worse still if it sends us its physicians. They have sworn among themselves to kill all other nations with their medicines. They exercise their art for the sake of gain, and seek to get our confidence in order to be able to poison us the more easily. Remember, my son, that I charge you to have nothing to do with physicians."

That sturdy old plebeian himself was the author of a treatise upon *Family Medical Treatment*, the first work of the kind ever compiled by a Roman. He was by no means opposed to the use of medicines. So far from it, Pliny remarks, that he subjoined to his denunciation an account of the medical prescriptions by the aid of which he had assured to himself and to his wife a ripe old age. In this treatise he recommends the flesh of the duck, pigeon and hare as food for the sick; and his remedies are chiefly vegetable—cabbage or colewort being the favorite. His formulas, many of them, are quaint enough. He was a firm believer in charms and incantations. For dislocations he makes the following curious prescription: "Take a green rush, four or five feet long, cut it in two in the middle, and let two persons hold it on your thighs. Begin to sing, and continue to do so until the two pieces are joined together again. Wave a blade over them when the two pieces are joined and touch one another, seize hold of them, and cut them across lengthwise. Make a bandage herewith on the broken or dislocated limb, and it will heal. Sing, however, over the dislocation daily."

It is the fashion now-a-days to consider everything ancient, so far as it differs from modern usage, as a legitimate theme for scorn and derision. The method of the old Roman, adhering, pertinaciously as he does, to the ways of his ancestors, can hardly fail to escape. Nevertheless, when we consider the surgery of Archagathos, we must acknowledge in all candor, that the patient would be far safer under the hands of the former than as he would be treated by the Greek. Indeed, though much singing must be a sad bore to

many sufferers, its beneficial magnetic effect upon others is well known.

THE METHODISTS.

Not till a century had passed do we hear of another physician distinguished at Rome. At that time, the famous Mithradates was making himself master of Asia Minor and Armenia. Asklépiades, a native of Prusa (Brussa), refusing his invitation to reside at court, left his country to seek his fortune elsewhere. Coming to Rome, he began the teaching of rhetoric, but having gained knowledge of medicine, launched forth as a physician. Pliny describes his methods with unconcealed contempt. He was an Epikurean in his philosophic belief, and based all his notions upon that system. He derided Hippokrates, declaring that the study of Nature, upon which the great Koan had insisted so strenuously, was but the study of dying. Profiting by the general aversion of the harsh methods employed by Archagathus, he adopted the opposite expedient of bland and pleasant medicines. He was suave in deportment, fascinating in his manners and familiar with every art of winning favor. Indeed, he enjoyed the friendship of the principal men of Rome, and seems to have overcome the ancient prejudice against physicians. It was a favorite declaration of his that *diseases had recently changed in type, and that new maladies had appeared*, requiring a milder but more efficient treatment. This was supported from a statement of the philosopher Demokritos, that various worlds about us were dissolving and disseminating their noxious emanations upon the earth. The change of habits and introduction of

luxury into Rome from the East were enough to account for the new diseases and the disappearing of old ones. But the recurring of elephantiasis and hydrophobia gave plausibility to the assertions; and it must be acknowledged that he was successful in treatment and even preternaturally acute in perception. Meeting a funeral procession one day, he took the body and restored it to animation, impressing the bystanders with the conviction that he had raised the dead to life.

He taught that inflammation was due to obstruction of the molecules of the body, and dropsy from the dissolving of the flesh into fluid. He rejected harsh methods, discarding emetics and substituting enemas for cathartics. He made free use of blood-letting, and performed bronchotomy to relieve angina and paracentesis for dropsy. Inculcating that diseases were produced by obstructions, his principal means of cure were dieting, abstinence from wine, exercise on foot, riding in litters, bathing and massage. Of the latter method he was particularly enthusiastic and gave minute directions as to its employment. He boasted that he was never sick; and indeed Pliny informs us that he died with no malady, but from an accident. Cicero, who greatly admired his talents, remarked that "nothing brings a man nearer to the Divine than the giving of health to one's fellow beings."

The disciples of Asklépiades were regarded as a distinct school, and designated *Methodici* or Methodists. They were not only highly esteemed at Rome, but in the neighboring Greek-speaking provinces, Illyricum and Sicily. One of them, Marcus Artorius, was the physician of Octavianus, and accompanied him to

Philippi. Receiving a warning in a dream, he persuaded his patron, although suffering severely from illness, to go into the battle. The camp was seized by Brutus, and thus the precaution saved the Emperor's life.

The later Methodists made important changes in the doctrines of the school. Themison of Laodikeia was the first innovator. He divided all maladies into three classes: those characterized by constriction; those indicated by relaxation, and those of mixed symptoms. He used aloes and scammony as purgatives, and regarded the juice of the plantain as a universal remedy. He employed blood-letting for apoplexy and in surgery made use of the trephine. Juvenal scathes him severely for the many deaths among his patients. He is said to have died of hydrophobia contracted from a friend laboring under the disease. More likely both were suffering from hypochondriasis, which may be communicated by such contiguity.

Two brothers, Euphorbius and Antonius Musa, Greeks by birth, also achieved distinction. The former was physician to Juba II., King of Mauritania, and introduced the plant *Euphorbia*, into use as a remedy. Musa had studied medicine in order to relieve his father. The Emperor Octavianus had long been in bad health and his complaint was aggravated by the remedies. Musa, by use of the cold bath, succeeded in restoring him. The grateful Emperor presented him with a generous honorarium, decreed him the rank of knight, and placed his statue in the temple of Æsculapius.

Julius Cæsar, when he became arbiter of the destinies of Rome, had invited physicians and learned men to live in the Capitol, granting them the rights

of citizenship. Octavianus now issued a decree exempting physicians from taxation. Henceforth they were a privileged guild in Rome.

"This art, however," says Pliny, "did not harmonize with Roman gravity." Greeks alone carried on the lucrative profession. If, by any chance, there were physicians who did not come from the Peloponnesos or Asia Minor, they were compelled to use Greek idioms and write their prescriptions in bad Greek, as now-a-days it is done in bungling, ungrammatical Latin.

"People lose confidence in what is intelligible to them," says Pliny. "Even the few Romans who studied medicine thought it necessary to write their prescriptions in Greek, because if they should attempt to treat the disease in any other language, they would certainly lose all credit, even with the ignorant who did not know a word of Greek." Perhaps from this fact the modern practice derives its sanction of making use of Greek terminology, often to the climax of the absurd, in botanic, chemical, zoölogic and other nomenclatures.

CELSUS.

Aulus Cornelius Celsus, a native of Verona, living about the commencement of the present era, was considered the principal writer of the Methodic School. He was, like all intelligent physicians, proficient in the other learning of his age. "He touched nothing that he did not adorn." He compiled a cyclopediac work entitled *Upon the Liberal Arts*, in which he treated of philosophy, law, agriculture and medicine. He was thoroughly conversant with the doctrines of the Alexandrian School, and defended the study of anat-

omy against the Empirics. He was eclectic in his preferences, following Hippokrates in clinic practice, and the Methodists in remedial agents. He was also familiar with surgery, describing the operations for stone, cataract, depression of the skull, iridectomy, etc. He explains also the surgery of the *genitalia*, how to construct an artificial prepuce, perform infibulation and kindred matters. He was also a believer in remedies which are now placed in the category of superstitions.

THE PNEUMATICISTS OR SPIRITUALISTS.

The rise of the Pneumatic or Spiritual school was about synchronous with the present era. Athenæos was born at Attaleia in Pamphylia; from which place he afterward went to Rome. He was a critical scholar, and in his writings made the distinction between Materia Medica and Therapeutics. He also wrote a treatise upon Diet. He was a philosopher, but rejected the notion of four elements, declaring them only qualities of matter. "About the commencement of the Christian era," says the Rev. W. F. Evans, "Athenæos of Attaleia, revived the Platonic theory of the existence of an immaterial, active principle, called *pneuma* or spirit; and the state of this principle was considered to be the source of health and disease. A medical sect or school was founded under the name of Pneumatists, or Spiritualists, whose practice was based on this principle. Jesus, the Christ, seems to have adopted, or rather to have conformed his practice to that theory, and without deviating from it."

THE ECLECTICS.

Agathinos of Sparta was a disciple of Athenæos, and is accordingly enumerated among the pneumatists. He endeavored to establish a school of medicine upon a rational and philosophic basis, which he denominated *Episynthetic*, as combining the principles and methods of the various sects, so far they could be made to harmonize. His writings, however, are now lost, and we have no means to ascertain the views which he entertained, except as he has been quoted.

Arkhigenes, a native of Apameia, in Syria, was a student of Agathinos, and held like his preceptor the cardinal doctrines of the Pneumatic school. He once cured Agathinos of a delirium by anointing his head with warm oil. He is often described as the founder of the Eclectic School of physicians. He enjoyed a high reputation among his contemporaries during the reign of Vespasian and later emperors, and for a considerable period afterward; and his treatises on the pulse, chronic diseases, pharmacy, etc., were cited by Galen with warm praise.

Aretæos of Kappadokia, however, is generally considered as the brightest luminary of the Eclectic and Pneumatic schools. We have two of his works still remaining—one upon the *Causes and Symptoms of Acute and Chronic Diseases*, and a second upon the *Therapeutics of Diseases*. His admirable accuracy of description, the correctness of his views, and the elegance of his style were unexcelled. He appears to have anticipated many of the physiological and medical discoveries which are usually imputed to Galen. In explaining paralysis, for example, he defines carefully the distinct functions of the motor and sensory nerves, and

sets forth as a prominent exciting cause, indigestion, which is from impairment of the solar sympathetic ganglion. He wrote also upon mania, and gives a very accurate account of jaundice, as well as ulcerations of the throat and tonsils. In treating epilepsy he suggests the use of copper. He bled freely, incising the arteries and making use of leeches and cupping glasses. Veratum alba was a favorite remedy in his armamentarium. He made great use of milk, both from human mothers and from domestic animals; applied massage; administered wine and opiates without hesitation, but employed few drugs, depending principally upon diet and regimen. He was celebrated above other physicians for a total lack of professional bigotry.

The Eclectic School abounded with physicians of marked ability, many of whom enjoyed a wide reputation over the Roman world. Nor did it die out till political and other changes had produced a general revolution over the Empire.

MEDICINE IN THE ROMAN EMPIRE.

Under Julius Cæsar, medical men residing in Rome had received the honors and privileges of citizenship. Octavianus Augustus exempted them from taxation. Nero added to their importance. There were *archiatri populares*, or chief physicians, in the different wards of the city, and *archiatri palatini* or physicians of the Imperial Palace. These, in time, assumed and exercised a censorship and authority over their fellow-practitioners, checking innovation, and discouraging all who were not in strict subordination to their pretensions.

Under the Roman Republic learning had small honor, and the medical art was held in contempt. Soldiers dressed each other's wounds and waited on their sick comrades, till Octavianus became Emperor. After that time *valetudinaria* or military hospitals came into fashion. It was the duty of the prefect having charge of the camp to make sure that the surgeons visited the patients in the hospitals. These valetudinaria were attached to the winter quarters, and the generals who were in the practice of visiting the sick and wounded there sheltered, are named with great praise.

The institution of iatreia or public dispensaries, which had been peculiar to the Grecian commonwealths and Egypt, became general in the Empire. There were official physicians everywhere, supported from the treasury. The Gallic cities had established this practice at an early period, and doctors employed artifices similar to those of other politicians to obtain these lucrative positions. The army had its medical staff for the sick and wounded, the *lanista* for his gladiators, the rich man for himself and slaves, the Emperor for his own person and the numerous servants of the palace. Even the artisans sought to attach to their guilds or *collegia* poor practitioners who would be satisfied with very moderate fees. Rome abounded also with druggists and apothecaries who sold advice as well as medicines, and even lodged patients.

Women were also practitioners, and honored for their ability. An inscription contains the words: "*Juliæ Saturninæ—incomparabili medicæ*,"—to Julia Saturnina, the incomparable physician.

There were also *Scholæ Medicorum*, or meeting-houses for medical men,—perhaps places for instruction—at

Rome, Beneventum, Aventicum, and other places. The laws appear to have been very strict, and somewhat resembling the usages of some of the western aboriginal tribes of America. If a patient died from a remedy or malpractice of any kind, the penalty for the physician was banishment or death. Every physician was compelled to sign his prescriptions.

The Antonines were philosophers, in spirit as well as culture, and regarded themselves as the fathers and protectors, rather than masters of the Empire. They moderated the severity of the laws, founded charitable institutions, and sought to promote the happiness of their subjects. The guilds or trade-societies of the period, were allowed to assume organization and establish worship like distinct municipalities. A rescript fixed the number of public physicians which the cities of the highest, second and lower classes might not exceed. In the small cities five physicians, three sophists or professors, and three grammarians, or public teachers were authorized; and in the larger ones, ten physicians, five sophists and five grammarians. These might receive fees, but it was not considered creditable. A decree granted to Metrodoros a golden crown, because he "for twenty years a public physician, has saved many citizens, and now lives in poverty, having refused from them any fees." A special rate, the *iatrikon*, was levied upon the citizens, in order to defray the expenses.

The physicians were generally from Greece and Egypt. They were often vain and arrogant; those at Rome greatly scandalizing their patrons, by holding them in contempt as ignorant barbarians and clod-hoppers. Physicians and surgeons appear to have followed their vocations separately, and we read of

specialists, oculists, aurists, dentists, etc., as well as of Court physicians, and medical women who were employed for the diseases of women and children.

Pliny, the younger, is very severe in his criticisms of the medical practitioners of his time. He describes Crinas of Massalia (Marseilles), who united astrology with his art, subjecting the regimen of the sick to the course of the stars. This individual amassed a large fortune by his profession, which he afterward disbursed in the fortifying of several towns of the province. Another physician of note was Thessalos, the Lydian. He appears to have been pretentious and arrogant in manners, seeking to overawe and browbeat others by his assumptions. He did not scruple to denounce Hippokrates and other prominent writers; and he even had the audacity to write a letter to the Emperor Nero, declaring that his predecessors had contributed nothing to the advancement of knowledge. He worked his way to distinction by courting great men, and boasted that he could teach the healing art to a student in six months. He used to declare that he was the chief of physicians, and excelled other practitioners. In theory he appears to have been a Methodist, after the manner of Asklepiades, and he wrote on diet and surgery. Galen lost no opportunity to denounce him, and asserted that he had not the least correct notion in regard to the action of medicine. He had a large array of disciples, largely drawn from the working classes. Perhaps some of the bitterness against him was partisan rancor.

Avarice, according to Pliny, was the leading characteristic of the Roman practitioners of medicine. So great were their gains that artisans, such as boot-makers, carpenters, butchers, tanners, and even grave-

diggers entered the profession, while other callings were adopted by physicians who had not been able to obtain a foothold. Galen describes them as charlatans, boorish in manners and contemptible for their ignorance. The greater part of them, he declared, were unable to read, except with great difficulty. He satirically recommends that they should be very careful, when discoursing with their patients, not to make grammatical blunders; and he did not hesitate to assert that rival physicians, when at the bedside of sick persons, so far forget themselves that they would abuse each other, thrust out their tongues, and even come to blows. Yet they were, as Galen himself experienced, obstinately tenacious of their regularity and standing as medical men. The more unfit they were in morals and other qualifications the more arrogant were they in this respect. The *archiatri* held a sort of predominance over the commonalty of physicians, and there were medical societies or guilds that assumed the authority to examine candidates desirous to engage in the practice of medicine. All the same, ignorance was in the foreground, and with the support of their guild in case of prosecution, the laws to punish ignorant or unscrupulous practitioners were incompetent.

The Roman patricians were not friends to the liberal arts and would not educate their children to a profession, and accordingly were served by foreigners and by self-taught slaves and freedmen.

DIOSKORIDES.

The celebrated herbalist, Dioskorides Phakas, was a native of Cilicia. Having been a soldier he had visited many countries, and he employed the opportunities

thus offered in careful observation of the flora of those regions. His work *on the Materia Medica* for more than sixteen centuries was regarded as the highest authority. The thoroughness of his studies is shown by the fact, noted by Dr. Alston, that he enumerates "alone 90 minerals, 700 plants and 168 animal substances." Galen praises him warmly, but Dr. Cullen, of our modern times, who hardly believed any ancient man to be learned, criticises him severely. His works afforded the basis for medical study in the later schools of the Nestorians, the Arabians, and Hindus.

GALEN.

Claudius Galenus was born at the metropolitan city of Pergamos in the year 131. He seems, from his own account, to have illustrated the incorrectness of the notion that men inherit their superiority from their mothers. He describes his mother, Xanthippé, as frivolous and unworthy, but his father, Nikon, as scholarly and of an excellent character. The latter himself had instructed his son in the philosophy of Aristotle, and employed a teacher named Gaios to teach the other systems. Directed by a dream, he resolved, when Galen was but sixteen, to train him for a physician. Pergamos was at that time celebrated for its temple of Æsculapius, its savants and physicians. The youth was placed in turn under the tuition of Satyros, a distinguished anatomist, Stratonikos, an Asklépiad, and Aiskhrion, an Empiric. At the age of twenty-one, his father being dead, he went to Smyrna to hear the lectures of Pelops and Albinus at the school of philosophy. Next he journeyed to Korinth, to perfect further his philosophic studies; after which

he made the tour of Asia Minor, Syria and Palestine. He then became a student at the School of Alexandria. Having served for knowledge for seven years, like the Hebrew patriarch, he received a summons from the priests in his native country to return home. On his arrival the Asklépiads appointed him to the professional charge of the athletes and gymnasts at the temple-school of Æsculapius. A revolt taking place some years later, he left Asia to try his fortune at Rome, in the year 165. He was a philosopher as well as a professional man, and a philosopher was sitting upon the throne of the Cæsars. He was warmly welcomed by fellow-philosophers, by the Roman Consuls, and made the friendship of the youth, Septimius Severus.

It was not long, however, before he drew upon himself the jealousy and enmity of the Roman guild of physicians. He was infinitely their superior in skill, liberality of sentiment, and erudition, and was hated accordingly. At the desire of the leading men of the city, the savants, philosophers and noblemen, he delivered a series of public lectures upon Anatomy. This afforded the desired pretext. It was a violation of the code in force among Roman physicians, as well as of the so-called Hippocratic Oath, which forbade the instructing of non-medical persons in any of the mysteries of professional knowledge. Galen had been accepted by the priests of the Asklépion at Pergamos, but he found himself totally outside the pale at Rome. But for the favor extended to him by the Emperor, Marcus Aurelius, he might have been arraigned and put to death. He was actually in danger of personal violence, and a tumult created by his adversaries compelled him to desist from lecturing. He was

denounced by all the ribaldrous epithets current among the medical men of that period, and finally in disgust left Rome and returned to the East. A year later, however, he was summoned by the Emperor and his colleague to accompany them on a military expedition, and he afterward became the physician of the Imperial family. He appears to have held this position of archiatros under Septimius Severus. Returning to Pergamos, he devoted himself to literature, thus becoming the oracle of the medical world for fourteen centuries. He is said to have died in Sicily in the year 201.

Galen professed to be Eclectic in his methods and doctrines. He had been carefully instructed by the best teachers in the various medical schools, as well as in the Platonic, Stoic and Epikurean philosophies. He wrote dissertations upon the *Timæos* and Platonic Dialectic, and professed the greatest admiration for Hippokrates, but in logic and physical science he was a follower of Aristotle. He did not hesitate to denounce abusively the doctrines of the various medical sects, declaring that although Hippokrates had opened the true road, he himself had removed the difficulties encountered in it, and extended it over a larger area.

Whether this temper and assumption of superiority operated to create the animosity which he encountered in Rome, or whether that animosity was the cause of his bitterness of feeling, may be worth considering.

He regarded the knowledge of the structure of the human body as the foundation of the healing art. In his works, almost every bone and process of bone, every twig of nerve, every ramification of blood-vessel, every viscus, muscle and gland known to modern anatomists, is described with great minuteness. He appears to have followed Herophilos and

he has been severely criticised by Vesalius, but was as warmly defended by Eustachius. He pointed out clearly the distinction between the cerebral and spinal nerves, as well as the distribution into nerves of motion and nerves of sensation. He also defined the functions of the arteries and veins, and explained endosmosis and exosmosis as the "attractive" and "expulsive" faculties. In operative surgery, he confined himself principally to the methods of the Alexandrian school. He gives us an account, however, of an operation which he performed, cutting open the breast-bone of a patient so as to lay bare the heart, in order to give vent to a collection of fluid in the thoracic cavity. He appears, however, to have conformed at Rome to the prejudice against surgical practice; and in his capacity of archiatros he kept a dispensary and drug-shop in the Via Sacra, to which patients resorted.

He gave much attention to Materia Medica and Pharmacy, but his medicinal articles from the vegetable kingdom were far less in number than those named by Dioskorides, although he enumerates more animal and mineral remedies. He was very full in his accounts of disease, but not comprehensive. He considered stagnation and putridity as causing every morbid change in the fluids of the body. All fevers were attributed to this source, except the kind called *ephemera*. Unfortunately, the theory gave rise, at a more modern period, to a mode of treatment most injurious. Instead of air, water and a cooling regimen, the curtains were drawn in the room of the sufferers, fires were kept up, and the food and medicine were of the most heating kind. It required the most zealous protest of the later schools to produce a change to more rational measures.

The doctrines of Galen have been declared materialistic. Yet his views appear, sometimes at least, to resemble those of the pneumaticists. He taught that some varieties of fever had a spiritual cause, and is said to have regarded charms and amulets as superior to medicine. In his philosophy he accepted the doctrines of Plato and Aristotle, in preference to those of Epikuros, and inculcated the existence of final causes, maintaining that means do not lead to ends, but ends to means. He reiterated the declarations of Hippokrates in regard to the mantic or divining power of the human soul. "In sleep," says he, "the soul retires into the innermost portion of itself, frees itself from outward duties, and perceives everything that concerns either itself or the body." Doubtless he referred to the temple-sleep and hypnotic vision produced by mesmeric manipulation. He must have employed it while a physician at the Asklépion in Pergamos. He certainly predicted the course of a disease with an accuracy apparently preternatural; and he professed to derive much of his information from this agency.

LAST YEARS OF ANCIENT MEDICINE.

After the death of Galen medical learning appears to have declined over the whole Roman world. The various philosophic schools gave instruction, but a dry rot was everywhere. The Serapeion at Alexandria held out longest. Zeno, the Kypriote, for a time attracted large classes of students; and his disciple, Oribasius, of Pergamos, was archiatros or court physician to the Emperor Julian. It was the desire of that monarch to revive the ancient learning, and at his request Oribasius made a compilation or synopsis of the

medical works extant, dividing them into seventy books, of which all but seventeen are lost. He also published several treatises of his own. The death of the Emperor put an end to such attempts. The Greeks gave up their former zeal for medical studies. A legend was related that St. Hilarios overcame the Æsculapian Serpent at Epidavros. By this we may understand the subversion of the Asklépiads, with their worship and professional labors. Whether this was in anywise a calamity may be a question. Like their Khaldæan predecessors, they seem to have largely deteriorated, becoming more or less a class of diviners and fortune-tellers. They fell into decay and were forgotten. Asklepiodotos for a time, revived the former forgotten learning. He had been a disciple of Proklos in the Eclectic philosophy, and of Jakobos in medicine. He was the author of several works on ethics and physical science, and his medical attainments exceeded those of his master. He was familiar with the virtues of medicinal plants, and introduced Veratrum alba again into use. He was also skillful in music and zoölogy, and also wrote a commentary on the *Timæos* of Plato.

"During the first centuries, indeed, of the Christian era," says Professor Dunglison, "theosophy had considerable influence over the schools in which medicine was taught. In the first century the opinion generally received was that the Apostles had obtained the faculty of curing all diseases by means of the apposition of the hands or by inunction with holy oils and ointments; and it was believed that the disciples of Christ had transmitted the power which they had received from their Master to the elders of each community. * * In the fourth century Christianity had

extended through the Roman Empire, and for the reasons just mentioned, medical education in the public schools was everywhere totally neglected, if we except at Alexandria, where, even at that period, it was held in some account."

The Persian dominion now became the place of refuge for men of learning. The disciples of Nestorius, outlawed and persecuted by the dominant Catholic authorities at Constantinople, found homes and protection under the blacksmith's apron. There they established the Khaldæan Church in the country of the Euphrates, which soon extended its missionary operations over all the far East, clear to Egypt, India and China. Their converts eventually became more numerous than the communicants of the Catholic Church, both Greek and Roman combined. They were everywhere the patrons of learning. Their university at Edessa was famous for the influence which it exercised over the Eastern world. Their medical college also became justly distinguished for the number of its professors, their superior scholarship, and the excellence of their doctrines. A public hospital was also established, at which clinical instruction was imparted to students, and the institution was thronged from every region where the Khaldæan Church had attained a foothold. Stephen of Edessa, was one of the most celebrated teachers in this school.

About the same period a hospital for the reception of the poor was founded at Rome by Fabiola, the friend of St. Hieronymos (Jerome), which has been erroneously supposed by many to have been the first institution of the kind.

The Nestorians, however, by no means concentrated all their efforts upon one place or university. Others

were established where they could be sustained. They had a school at Nisibis, and at a later period they, in coöperation with the Jews, founded a school of medicine at the city of Chondesabur, which was frequented by students from Persia and Arabia.

Meanwhile, Alexandria continued to hold up the dimming torch of medical knowledge. The Emperor Justinian closed the schools of philosophy, and so put an end to medical instruction in other parts of the Empire. About this time, in the year 543, a plague devastated the Roman world. It attacked all, without regard to climate, season, age or mode of life, and its fatality has hardly been surpassed. Prokopios, who describes, it declares that it carried off ten thousand daily at Constantinople. One-half the population perished; whole towns were deserted, and the arts were abandoned. Henceforth, barbarism was universal. No physicians of the period made any record of the terrible visitation that could be of service to others, so great was their ignorance.

Aëtios, a native of Amida or Diarbekir in Mesopotamia, flourished at this period. He had studied medicine at Alexandria, and wrote extensively upon medical subjects. He set forth Materia Medica with great precision, and is exhaustive upon fever. He also excelled in surgery; being the first writer that has mentioned the Guinea worm, and also skillfully delineating the treatment of aneurisms, operations upon the eye, hernia, peritonitis, orchitis, hæmorrhoidal tumors.

In the department of Obstetrics he surpassed every ancient author. He also wrote upon pharmacy and quoted the recipes of King Nekheb, Galen, Hippokrates and Dioskorides. All the same he was a

believer in the virtues of charms, amulets, prayer and the magic touch. In preparing medicines, he directs an invocation to the God of Abraham, Isaac and Jacob; and for a foreign body in the œsophagus the surgeon is recommended to treat the patient's neck, and repeat to the offending body the command of the martyr Blaise, to remove itself. He also prescribes the sexual act as a remedy for disorder of the intestines. He considered the water of the Nile as possessing every virtue, and employed a green jasper set in a ring for numerous complaints, remarking that the plain stone was as salutary as one with a dragon engraved upon it.

Alexandros Trallianos,—Alexander of Tralles, in Asia Minor, also deserves a notice. No medical writer, whether of ancient or modern times, it is asserted, has treated of diseases more methodically. His method was to describe and arrange them according to the part of the body which they affect, beginning with the head and proceeding downward. He ventured often to differ from Galen, not so much from rivalship as from a desire to be right. He resolutely cautions the physician against the adopting of a plan for the treatment of any disease, without first having studied the specific and individual causes; and urges that he should not be led by any habit of routine, but always consider the age of the patient, the strength, constitution, and mode of living, as well as the season and atmospheric variations; and especially in acute diseases, to observe carefully the efforts of nature. He appears to have made great use of cathartic medicines in gout and rheumatic diseases, such as aloes, scammony and colchicum or hermodactylus. He also attached great value to magic incantations and amulets worn about the person.

Paulos Ægineta, or Paul of Ægina, properly closes the category. Little is known of his history, except that he studied medicine at Alexandria before it had been taken by Amru, in 640, travelling afterward in Greece and other countries to perfect his knowledge. He was principally celebrated for his attention to surgery, obstetrics and diseases of women, and is by some considered as the first man-midwife in history. He exhibited much originality in his description of operations. He published a work entitled *An Abridgment of All Medicine*, in seven parts, compiled from ancient writers, with his own observations subjoined. He did not hesitate to differ from Galen and Hippokrates, when his own observation warranted this; and later writers quote him with confidence.

The dismemberment of the Roman Empire, the utter overthrow of Persia, and the rise of a new faith in Arabia, changed the entire aspect of the civilized world. With the fall of Alexandria the old order of things passed away. Ancient learning was vanquished in its last fortress. Apollo and Æsculapius were dethroned; the Asklépiad, Dogmatist, Empiricist and other sectaries passed into oblivion. Only Galen remained as the chief luminary of the long night that now hung its black curtain over the medical world.

CHAPTER III.

MEDICINE IN THE MIDDLE AGES.

MODERN HISTORY is commonly regarded as beginning at the year 476. Adolf, the son of Alarich, had contemplated the extinguishing of the Roman Empire and the establishment of *Gothia* upon its territory. In that year the last Emperor, Romulus Augustus Cæsar, abdicated the throne; Italy became simply a kingdom, and Gothic countries existed upon the ruins of the Empire. Yet it seems almost as though for the East a period somewhat later would be more suitable. The rise of Islam, the overthrow of the realm of Persia, the disruption of Syria from the Grecian Empire, the fall of Alexandria, with its school and library, were the rolling up of the former heavens and the introduction of a new era upon the earth. The world was then Gothic, Greek and Moslem.

The sun of knowledge had set all over Europe, and only stars and torches remained to lessen the heavy darkness. All kinds of learning, while not proscribed outright, were, nevertheless, held in low esteem. Kings and clergy alike were illiterate; barons and bishops were sometimes unable to write their names. The commonalty had sunk into besotted ignorance.

The art of healing was buried in the same abyss. From its rank as a part of learning it became a func-

tion of religion. "After the sixth century," says Macdonald, "the monks of the West practiced the healing art as part of their divine calling, by resorting to prayers, relics of martyrs, holy water and other Romish ceremonials; and innumerable cures are said to have been accomplished by invoking the aid of saints, and other superstitious practices. In the seventh and eighth centuries the remains of the knowledge which had accumulated in the East appears to have been more or less preserved by the monks of the West"

"PHYSIC" AND "PHYSICIANS."

The Roman missionaries whom the first Bishop Gregory sent to England to convert the Saxons, opened schools there in which medicine was made a study. After the phantom of a new Empire had risen at Rome, teachers were procured from those institutions for those just established in France and Germany. In the year 805, the Emperor Charlemagne commanded that medicine should be added to the curriculum. The term *physic*, from the Greek word Φύσις (*phusis*) the natural constitution, was employed by Hippokrates, and by later writers to signify pharmacy and sorcery, and thus became the designation of this art, and its teachers and practitioners were designated *physicians*. Some of the glamour of occult power and knowledge hung about the name, and many have continued to believe in their secret heart that the medical prescriber could arrest the approach of death and absolve from the penalty of disregarded hygienic conditions.

For two or three centuries medicine was taught in such fashion in the schools connected with the cathedrals. The knowledge imparted was inconsiderable,

and the skill and morals of the practitioners were so inferior as to bring scandal and contempt upon them. Finally the various councils of the Gallican and Roman Churches, some centuries afterward, prohibited priests outright from practicing physic or surgery.

RISE OF ISLAM.

Meanwhile a new illumination had appeared in the East. The Hanyfite *khotan*, Halibi or Mohamed, had been taught in youth the doctrines of the Nestorians at Bostra. "His first and ruling idea was simply religious reform," says Professor Draper—"to overthrow Arabian idolatry and put an end to the wild sectarianism of Christianity. * * * It was an offshoot of Nestorianism ; and not till it had overthrown Greek Christianity in many great battles, was spreading rapidly over Asia and Africa, and had become intoxicated with its wonderful success, did it repudiate its primitive limited intentions, and assert itself to be founded upon a separate and distinct revelation."

The founder of Islam earned an honorable place in the golden book of humanity. The new religious movement of which he was the herald, became the agency for the restoration of literature and philosophic learning to the barbarized nations. He considered himself illiterate, but he prized knowledge beyond valuation. "The ink of the learned is as precious as the blood of the martyrs," the *Kuran* declares. For a brief season, the enthusiasm of his disciples degenerated into fanaticism, and like contemporary religious propagandists, they enforced conversion by war and massacre ; but they were early to establish toleration and reinstate learning. They established an Empire

greater than that of Alexander or the Cæsars, in tens of years where the Romans had required hundreds; and came to Europe—"they alone, while darkness lay around, to raise up the wisdom and knowledge of Hellas from the dead; to teach philosophy, medicine, astronomy and the golden art of song to the West as well as the East; to stand at the cradle of modern science and to cause us like Epigoni forever to weep over the day when Granada fell."

PERSIAN SCHOOLS.

The Nestorians had preceded the Moslems in enthusiasm for learning and the dissemination of their doctrines. Their university at Edessa was widely celebrated, and from the School at Nisibis they had, with a zeal like that of the Buddhist Asoka, sent their missionaries to promulgate the doctrines of the Khaldæan Church from Arabia, Abyssinia and Egypt, to India, China and the mysterious North. They translated the works of Aristotle into Persian and Arabic, and placed the writings of Pliny, Galen and other savants before their students in their own language. They were too noble for racial or religious jealousy, and accordingly, in connection with the Babylonian Jews, established the medical college at Chondesabur, in the province of Khusistan, or Kush, the ancient Susiana. This school continued till the modern period, and its physicians were so widely distinguished that the Emperor at Constantinople, Andronikos III., (1322–1338) sent for them to treat him for a tumor of the spleen. When the first disciples of Mohamed in Arabia were threatened with persecution, they found protection in Abyssinia, under the Nestorian King.

About the same time the Persians had the dom
over Egypt, and learning accordingly received a
porary encouragement. Syrian scholars came
Alexandria to revise their versions of the Old a
New Testaments, preferring the Greek text as bei
more accurate than the Hebrew.

ARABIAN LEARNING.

At this period, Aaron Ahran, a priest of that
was distinguished as a physician and medical w
of great ability. He was the author of a compil
entitled *Pandects of Medicine*, which was translated
Arabic and was the oldest work upon the subje
tant among the Arabs. He is the first writ
made particular mention of the small-pox.

For a brief period, the fanaticism of the Mo
chiefs impelled them to discourage learning.
Khalif Omar is said to have commanded the burni
of the few books that remained in the library at Alex
andria. The greater number had been removed and
destroyed during the reign of Theodosios. The sub-
sequent Khalifs, however, were men of a more liberal
character. Ali, the cousin of the Prophet, was a lover
of learning. Moawiah, the first of the Ommiade
dynasty at Damascus, whose father had been Mo-
hamed's adversary at Mekha, began the new order of
things with the encouraging of literature. From this
time, the Jews and Nestorian Christians labored to-
gether; the Christians principally becoming teachers
in Moslem families, and the Jews more generally the
physicians. The philosophic and medical works of
the Greek authors were translated by them into Syria
and Arabic.

THE KHALIFS.

The Khalif Al Mansur transferred his capitol to the new city of Baghdad, which speedily became a splendid metropolis. He gave much attention to the promotion of the higher learning. He was a liberal of astronomy, medicine and law. He founded university of Baghdad, and for centuries it was the most eminent in all Moslem countries. chemistry was developed as a distinct branch of wledge, with the aids of the balance, the crucible distilling apparatus ; and alchemy, so generally nderstood and misrepresented, was cultivated as ence of evolution. Public hospitals and laboratwere established, and students thronged them all countries. At one time there were no less six thousand, chiefly Christians who had been led for their religion.

THE GREAT AL MAMUN.

Harun Al Rashid emulated this example of his grandfather, and commanded schools to be opened in every mosque. Al Mamun, however, excelled in such endeavors. He made Baghdad the centre of learning. The *Kuran* was not permitted to stand in the way. Scholars, he declared, were the elect of God. His energy in the pursuit and cultivation of secular knowledge led the Moslem doctors of divinity to brand him as apostate, and denounce the judgment of God upon him. They condemned him for having interrupted the devotions of the faithful, by encouraging the teaching of atheistic philosophy. He believed the to be a globe, instead of a plane as the *Kuran*

represented, and had set astronomers and mathematicians to ascertain its circumference. He had caused Grecian literature to be introduced into Arabian schools. He founded libraries, in each of which was a department for the copying of manuscripts, translation and the composing of new works. Every teacher of the higher grades was expected to write a book. The works of Ptolemy, the astronomer, were translated under the name of *Al Magest.* The Khalif Al Mamun was an enthusiastic collector. Hundreds of camel-loads of books were imported by him, and he even negotiated with the Greek Emperor for one of the libraries in Constantinople. So abundant were books, and so greatly prized, that a physician at Baghdad refused a tempting offer to remove to Bokhara because four hundred camels would not suffice to carry his library with him.

MEDICAL AUTHORS.

Under these auspices, medical learning greatly prospered. Harun placed the physician Yahia ben Masaiah (Maswa) in charge of the schools at the capitol. After him Honain or Yohanan, a Nestorian Christian, became widely celebrated for his scholarship and indefatigable diligence. He translated the works of Plato, Hippokrates, Aristotle, Galen, Alexander, Paulos of Ægina and others; wrote commentaries upon them and composed several original works. His sons, Isak and David, were also authors and translators. In his writings we find the first mention of academic degrees conferred by learned societies. The college of medicine at Baghdad, and others at Cairo and elsewhere, were charged not only with the instruction of

students, but with their examination as to fitness for the practice of the art of healing.

The methods in vogue at this period appear to have been crude and often peculiar. Astrology was generally employed and remedies were selected in accordance with the aspect of the sky. Uroscopy was regarded as an important factor in diagnosis, and the physician carefully investigated the previous history both of the patient and his disease. The *Thousand and One Tales* appear to have been a fair representation of the matter. The works of Galen were generally studied for information in anatomy. Moslem legislation did not permit dissection. Surgery was also limited; and women were the midwives and operators for hernia, calculus, malversions and other matters pertaining to their own sex.

Geber of Mesopotamia, sometimes called an alchemist, developed several chemical and pharmaceutic preparations that were greatly esteemed. Among these were the mercurial compounds, corrosive sublimate and red precipitate, nitric acid, nitromuriatic acid, and nitrate of silver. Gold, and probably the chloride, was much used by Arabian hakhams. Saber, the head of the school at Chondesabur, compiled a *Pharmacopœia*, which was published under the authority of the Government, and contained special directions against adulteration and the selling of medicines at too high a price.

The most celebrated *savant* of the Eastern Khalifats, however, was Abu Bekr Mohamed al Rasi, or Razes, so called from his birthplace, Rages in Media. He was placed in charge of the principal hospital at Baghdad, about the year 890, and became a distinguished writer and medical authority. He compiled two great

works, the *Continent* and *Al Mansor*, and he appears to have added several chemical preparations to the category of official medicines. Among these were orpiment, blue and green vitriol, and borax. He was the first to describe the measles with distinctness, and he wrote ably upon small-pox. He also gave a description of spina ventosa and spina bifida, hernia and its treatment, and other surgical topics, borrowing largely from Hippokrates, Ætios and Paulos of Ægina. For cancer he advised against excision, unless the disease was limited; in which case the entire mass affected should be removed. For bites of rabid animals he prescribed the cautery.

Ali, a native of Persia, flourished in the same century, and was sometimes designated the *Magus*, because of his extensive knowledge of medical, and what was considered *occult* lore. He wrote a work entitled *The Royal Book*, which appears to have been a compend or digest of what was extant respecting anatomy and physiology. It was principally computed from the Greek authors and the works of Razes, and was long regarded as the standard authority.

AVICENNA.

The chief luminary of medicine in the East, however, was Al Husein ibn Sina, or Avicenna. He was born in 978, at the city of Bokhara, then also a centre of learning. He seems to have been an omniverous scholar, proficient in every department of knowledge, and skillful in making all that he had learned his own. Hence he became the supreme arbiter of medical thought, whom it was temeritous to oppose, or even dispute. His great work, the *Canon*, was for six cen-

turies the basis of all that was permitted to be taught dogmatically in medical schools. His chief quality, however, appears to have been one of assimilation. He brought together the doctrines and discoveries of those who had preceded him, and put them forth in a new form as his own. Aristotle was the dominant authority in Arabian philosophy, and Galen in medicine; but Avicenna was equal to both. He may have lacked originality, but he had the will and force of character to impress his sentiments on others; and even at the present day the medical world has not become emancipated altogether from their authority.

LEARNING EVERYWHERE PROMOTED.

The same passion for literary culture which the Khalifs at Baghdad exhibited was also general in the other Arabian dominions. Colleges were established in Mongolia, Tartary, Persia, Mesopotamia, Syria, Egypt, Northern Africa, Morocco, Fez and Spain. The taste for science and its reward was diffused from Samarkand and Bokhara to Fez and Cordova. The son of the mechanic was instructed as well as the son of the nobleman, and indigent scholars received an allowance, as they still do at the great mosque at Cairo. Nestorians and Jews, as well as Moslem savants, were made superintendents of these institutions. "The teachers of wisdom are the true lights and legislators of this world," said the great Khalif Al Mamun.

Meanwhile the realm of the Khalifs became dismembered by the revolts of ambitious Arabian chieftains, and by conquests of Northern barbarians. The dynasty of Fatimites, making Fatima the daughter of

Mohamed their Madonna, after the manner of the Christians before them, established a rival Khalifat in Egypt, which for a long time afterward held Northern Africa and menaced the Southern countries of Europe.

Upon the overthrow of the Ommiad family at Damascus, one of the survivors made his way to Spain, where he succeeded in establishing an independent dominion. He made Cordova the capital, and established a university, which for centuries was the centre of learning in the West. His successors continued the same liberal policy. In the tenth century Al Hakham II. became Khalif. He was noted for his aversion to war and political intrigues, and for his love of literary culture. He established a library of four hundred thousand volumes, superbly bound and illuminated; and it is recorded that he had read and annotated them all. He kept a manufactory of books, with copyists and binders, in his palace. Learned men of every faith were welcomed there; and Christians who were afterward famous as scholars and ecclesiastics resorted to the schools of Cordova, Seville and Toledo. Gerbert, who became the Pontiff Sylvester II. and proclaimed the Crusade before Peter the Hermit, had been a student of literature and Moslem learning at Cordova. He may have deprecated the revolution that had occurred in the Khalifat, or he may have desired to screen himself from the imputation of being a student of magic and occult learning.

The *hajib* or mayor of the palace, Mohamed ibn Amir, seized the supreme power and held it till the expiration of the century. Placing himself at the head of the orthodox party, he caused all books on philosophy, astral science and occult learning to be removed from

the library and burned. He, nevertheless, continued to be a patron of learning. Under his descendants the country was divided into several monarchies, all of them Moorish and Berber, rather than Arabian.

ABULKASIM.

When governments are unsettled, and men of merit hold aloof from active participation, many turn attention to philosophic and literary pursuits. This was the case in the countries that had been included in Andalusia. Medical knowledge was theurgic, and surgery languished. Finally, in the latter years of the eleventh century, Abu al Kassim, or Abulkasim became distinguished as a teacher and a writer upon surgery. He found the art in a deplorable condition, and set about to improve it. He described various surgical operations and the instruments used; and he also prepared a manual for surgeons of the female sex having occasion to practice lithotomy. He also invented several instruments; among them a probang to dislodge bodies from the throat; an instrument for the treatment of lacrymal fistula, and a needle for operations for cataract. He explained an operation for hydrocephalus, the method of ligation of tumors, amputation of the limbs for gangrene, excision of the tonsils, and tracheotomy. He mentions also several diseases, which some have imagined to have been first observed at a later period.

AVENZOAR.

Forty years afterward, Abu Mervan ibn Zohar, or Avenzoar, became famous at Seville. He appears to

have made use of his own bodily disorders as a basis for observations. He had suffered from inflammation of the mediastinum, terminating in abscess, and wrote extensively upon the disease, as well as upon inflammation, dropsy and empyema of the pericardium. He exhibited the genuine Moslem abhorrence of surgery in sexual diseases, denouncing lithotomy, and even a look upon that region of the body as an indecency. He gave descriptions of abscess of the liver, rupture, fracture of the hip-bone, wounds of the veins and arteries, tumors and other surgical diseases, with the appropriate treatment in each case. He prescribed rectal injections and baths of milk and other nutritious substances, in cases of stricture of the œsophagus.

PHILOSOPHIC PHYSICIANS.

Philosophy and "magic," as has been elsewhere remarked, were taught with medicine and other arts at the Arabian schools. The former was the educing of causes and origins, thus accounting for the manifestation and results, which are so commonly exalted by the designation of science. Magic, as defined by the Grecian philosopher, Proklos, formed the last or lowest department of sacerdotal knowledge. It comprises the investigation of everything sublunary, its nature, power and quality. In this scope are embraced the elementary substances and their constituents, animals, plants and their products, stones and herbs—in short, the power and essence of everything. "There is a lamentable departure from Divinity in man," says this philosopher, "when nothing worthy of heaven or celestial concerns is heard or believed, and when every divine voice is by a necessary silence, dumb."

Abu Bekr ibn Tophail, born in Spain in 1100, and dying in exile in Morocco in 1186, was one of the profoundest thinkers of the time, and exercised a wide influence. He was alike versed in medicine, mathematical science and philosophy. He appears to have been a Platonist rather than an Aristotelian, and his writings centre accordingly upon the dialectic of the Akadémeia. The world of sense, he declared, was only the shadow and reflection of the world of intelligence. "Man, considering the number of his organs and the variety of their function, would seem to be a compound being; but in looking again at the secret tie which unites all these organs, and their principle of action, he is seen to be truly but an individual existence. This unity is evolved from the unity of the vital principle."

Abu Bekr ibn Yahia, or Ibn-Badja (son of solitude), a native of Zaragosa, also flourished in the eleventh century. He studied medicine and the liberal sciences; and afterward became the author of several works upon physic, mathematics, and philosophy, among the latter a commentary upon the writings of Aristotle. He was destined, however, to encounter the fanaticism of his age. Ibn Khakan, a contemporary writer in Andalusia, denounced him as a destroyer of religion, and an affliction to true believers, in that he occupied himself with vain studies, such as philosophy, mathematical knowledge, the celestial bodies, and variations of climate, to the neglect of the *Kuran* and orthodox Moslem doctrine. Like other sages of that time, he was finally compelled to leave his native country and make his residence in the province of Fez, where he died in 1138.

AVERROES AND MAIMONIDES.

The most celebrated student of Avenzohar was Abu Waled ibn Rashid, of Cordova, better known as Averroes. He was the author of several medical works, which are still preserved in Latin; but his chief distinction was won in philosophic speculation, to which he devoted himself with the greatest enthusiasm. He wrote a commentary upon the works of Aristotle, in which he embodied a theosophy like that of India, the dogmas of Erigena and others setting forth the doctrine of emanation and the return of the soul to divinity. It is the fashion now to criticise and speak depreciatingly of the teachings of this writer, but at that time they were adopted over all Europe, by schoolmen, ecclesiastics, and thinking men in all walks of life.

The greatest luminary of Cordova, however, was the famous Maimonides, the Rabbonu Mosa ben Maimun. Believing, like a conscientious rabbi, that it was a sin to make use of religious knowledge as a craft by which to obtain a livelihood, he adopted the calling of a physician. He was the author of several medical works of much merit, and at a later period became the court physician to the famous Sultan of Egypt, Saladin, holding till his death in December, 1204. Despite his superior excellence in this profession, however, it was cast into the shade by his labors and attainments in philosophy and Hebrew theology. He was praised both in the East and West, as the Great Sage and Teacher, second only to Moses. Perhaps the characteristic of his expositions of most interest to non-Hebrews is his interpretation of the *Pentateuch* and other parts of the Bible as symbolic and allegoric

narrative, rather than literal history. In philosophic dogma, he followed Aristotle and the explanations of Averroes.

A consensus of religious belief appears to have been gaining ground at this period in the higher walks of life. Learned men have been described as having the same belief, and never telling what it is. At any rate, they are generally characterized by catholicity of thought and feeling; while the half-taught are prone to display a violent partisanship. It is so in medical circles, and the history of religion is similar. In the twelfth century there seems to have been a remarkable approximating of religious and philosophic beliefs. The Arabian speculative reasoners were of the school of Averroes; leading minds among the Jews entertained formally the doctrines of Maimonides, and in European Christendom they were current among the learned. The Franciscans regarded them with approval, and doctors in the universities of Paris, Bologna, and Germany taught them to their thousands of pupils. It has even been affirmed that Henry II. of England actually proposed to adopt the Moslem religion; that his son, Richard I., when engaged in the Crusades, held intimate relations with Mohamedan princes; and that King John sent an ambassador to the Almohade ruler of Spain and Morocco, offering to make Islam the court religion of England. Similar allegations were made respecting Emperors of Germany and princes in France and Italy. Men had begun to doubt whether all sanctity was circumscribed between Mount Lebanon, the Desert and the Sea. Indeed, an inscription on the pontifical chair, at the Vatican, disclosed in 1662, represented the Labors of Hercules, an heir-loom of the Republic and first Cæsar;

and again in 1795, when the French under Bonaparte occupied Rome, another examination revealed to view the Moslem creed inscribed on the seat: "There is no God but Allah, and Mohamed is his Apostle." It is by no means improbable that some amalgamation of religious faiths was once contemplated.

A REVULSION OF FEELING.

Eras of good feeling are generally succeeded by a crisis and revulsion to the opposite extreme. The ulemas and commonalty in the Moslem countries had been bitterly averse to the liberal sentiments of the princes and savants. The great Khalif, Al Mamun, was decried as a wicked perverter of the true doctrine, and the teachings of the philosophers were denounced in the mosques as tending to remove the distinctions between orthodox and dissenters, and to take away the hope of heaven or the fear of hell as incentives for good conduct. Military leaders arose to enforce the orthodox dogmas. Nur ed Din, of Irak, led the Atabeks to exterminate philosophers and heretic Moslems in the countries of Asia. His favorite general, the Kurd Saladin, carried the war into Syria and Egypt, overturning the Khalifat at Cairo, and planting in its place the Turkish dominion.

There were corresponding changes in the Andalusian, now Moorish provinces of Spain. The monarch placed himself at the head of the orthodox party and prohibited the lectures of the philosophers. Many were banished or imprisoned, and several put to death. Averroes himself went into exile, dying in 1198. The libraries were ransacked and all books not approved by the censors were destroyed. The Jews participated in the revolution. The works of Maimonides were

burned in their congregations at Montpellier, Toledo and Barcelona. The new ascetic order of Dominicans began a similar proscription in Christendom. A heated controversy took place in the principal cities and centres of learning; and at the South of France where were numerous sectaries, Jews, Albigeois having a Pontiff of their own, and others, there was proclaimed a crusade and war of extermination. The region was converted by war and massacre. The orthodox, who, like Innocent III., seriously doubted the dogmas of the Church, were cruel and murderous to those who manfully avowed their disbelief. The policy was commended and put in force to avoid all argument with dissenters, but to put them to death, as though to strengthen faith by cruelty and intolerance. In countries where the authority of the Church overrode that of the political rulers, the Dominicans were empowered to establish the Inquisition as a tribunal to uproot all heretical doctrines.

Thus the Turks and Mongol barbarians of the East, and the powers of Christendom acted in harmony for the overthrow of liberal learning and religious dissent. "The daylight of science went down over the nations, and an intellectual darkness, which endured for three hundred years, enveloped the general face of society. All the fountains of science were dried up, and the world seemed retrograding into the unillumined chaos of ignorance."

These were indeed the Dark Ages.

TRIBUTE TO ARABIAN MEDICINE.

It may be well to survey briefly the field in which the teachers of those former centuries had labored. Modern writers do not usually give much credit for

originality or profoundity of research to Arabian writers and practitioners. "A small number of discoveries in Materia Medica, or isolated observations," Professor Dunglison declares, "were the only advancements which they made in the science. Anatomy continued in the same state in which the Greeks had left it. The theory of medicine was filled by them with numerous subtilities, but no important acquisition was gained. As for surgery, they had no learned author upon the subject, except Abulkasim. Chemistry, and Materia Medica, in short, were the only two branches of medicine which were improved by them."

Doubtless this sweeping criticism includes the Judæan and other physicians belonging to the same period and category. It does not, however, appear candid, generous, or essentially fair and just. The writer appears hardly free from a proclivity to underrate and represent with partiality those who are not in strict accordance with him. He has not given the Arabian savants full credit for their work as conservators of such knowledge as was worth preserving, and for adding to it such contributions as they were able. They first differenced the pursuit of medicine into physic, surgery and pharmacy, thus opening the way for a broader and more thorough conception of the art. In making the preparation of medicines and chemicals a department by itself, they enabled explorers into that field to arrive at discoveries which have facilitated the investigations of later centuries. They also invented many surgical instruments; "attaching too much importance," as Macdonald remarks, "to the mechanical part of their profession." This criticism, perhaps, is just. Even at the present time too much consideration is given to operative surgery. Mere

dexterity in this way is not an infallible or sufficient evidence of skill. The physician, who by application of the principles of his art, can prevent the mutilation of the human frame, is entitled to the higher position in the ranks of the profession.

The deplorable fact is, however, as Professor Dunglison sets forth, that "while medical instruction flourished in the countries subject to the Moorish princes, and especially in Spain, ignorance possessed the Christian States of the West." Hence it was, that when the rulers of Granada and other Moslem countries interdicted philosophic teaching, and placed obstacles in the way of literary culture, medical knowledge went likewise into the penumbra of the eclipse.

The former accompaniments of theurgy and astrology continued to be incorporated with medicine and Aristotelian philosophy, as part of the necessary learning of the physician. Arnold of Villa Nova, a disciple of Raymond Lulli, and a professor in the University of Barcelona, was a zealous teacher of occult learning. He was also an expert chemist as well as alchemist, and introduced tinctures into professional use.

Pedro Juliani, a Spanish author, also belonged to the Arabian school. He compiled several books, both physiological and practical, following the Greek and Arabian writers, and rather simplifying their dogmas than departing from them. He afterward became Pontiff at Rome, adopting, as was the usage of ancient Egyptian kings, the name of John XX. or XXI.

The most famous of the later physicians of this school was Bernard de Gordon. His name suggests a Scotch origin, but we have no evidence that he was

not of Gipsy parentage—acquiring the designation by accident. He was a professor at Montpellier in the early part of the fourteenth century, and wrote a work entitled *Lilium Medicinæ*, which displayed great learning and a considerable degree of merit. It possessed the spiritualistic and astrologic features peculiar to the practice of the time.

A Portuguese writer, Valesca de Taranta, also figured at Montpellier about the same period. He is chiefly distinguished for the employing of arsenic as a local application for cancer. Another teacher at the same university was Henri de Mondeville. He was noted for his skill in surgery, but more than all by having been the preceptor of Guy de Chauliac, the most famous writer on surgery in the fourteenth century. "The *Chirurgie* of the latter," says Dr. Charles Creighton, of London, "bears the date of 1363, and marks the advance in precision which the revival of anatomy by Mondino had made possible." He had studied at Montpellier and Bologna, after which he practiced medicine and surgery at Lyons. It was at the period of the "Seventy Years' Captivity" when the Roman Pontiffs had their court at Avignon. Removing thither he officiated as physician to three of them in succession, besides gaining reputation as a reviver of the art of surgery. His great work, entitled *Inventorium, sive Collectorium partis Chirurgicalis Medicinæ* (a list or recapitulation of the Surgical Department of the Medical Art) was an accurate statement of surgical practice as it then existed. Fallopius ascribes to him the same rank in surgery as was given to Hippokrates in medicine. Haller describes his work with high praise. Having read all works written up to his time on that important branch of medicine, he care-

fully exposed the divers opinions of authors, and duly appreciated each; so that his work may be regarded as an excellent historical sketch of surgery up to his time.

This work became the basis of surgical instruction, going along with Mondino's celebrated treatise on anatomy, all over Europe. It is said in the author's commendation, that he had himself performed almost all the operations which he described. Among other original matters, he gives the first mention which we have of the Cæsarian section.

At this period there were five varieties of chirurgists, namely: those applying cataplasms to all kinds of injuries and diseases; those who only used wine in such cases; those employing emollient ointments and plasters, going no further; those making use of oil, wool, potions and charms; and lastly, "ignorant practitioners and silly old women, who had recourse upon all occasions to the saints, praised each other's writings perpetually, and followed each other in one undeviating track like cranes."

Chauliac ascribed the cause of the "Black Death" then prevailing to "the astral influence of the three great planets, Saturn, Jupiter and Mars, entering into conjunction in the sign Aquarius on the 24th of March, 1345." This, it will be remembered, was the period when that most dreadful pestilence had set out on its ravages, almost totally depopulating many districts in Europe and carrying off a third of the inhabitants of the earth.

THE HEALING ART OF EARLIER CHRISTENDOM.

During the earlier centuries of the present era the care and treatment of the sick were committed to monks, priests and individuals of reputed spiritual

powers. Among the agents employed were prayers, inunctions, amulets, sacred relics, and what we denominate faith-cure and mind-cure. Philosophers and Christian teachers alike commended these methods. "Prayer calls to our hand the gifts sent down from God," says Iamblichos. "Is any sick among you?" demands the Hebrew Apostle James—"Then let him call to his aid the elders of the assembly and let them pray for him, anointing him with oil; and the prayers of the faithful shall heal the sufferer." The use of amulets is world-wide to the present day, and they were employed alike by Christians, Gnostics, Greeks, Egyptians and Romans; and the esteem for relics of saints, with confidence in their virtue, was shared with the Eastern Buddhists. The resort to medicines and physicians was regarded as worldly prudence, if not as unbelief outright. The ministration of persons endowed with specific healing power was sought instead, and exorcisms were employed; so that all recoveries were esteemed as special divine interposition. In this way the charge of the sick continued for a long period in the hands of religious men exclusively. When orders of monks were instituted, the Benedictines became the principal surgeons and therapeutists.

THE ROYAL TOUCH.

This belief was supplemented by the notion that kings when inaugurated under sacred auspices, had also the power of healing by the imposition of hands. French writers insist that this rite was first practiced in their country. "Philippe I., Louis le Gros and Louis VII., touched for the King's Evil," says Michelet. "The kings of England would not have dreamed of

claiming the gift of performing miracles." Guibert adds the information: "The kings of England did not arrogate the gift until they had assumed the title and arms of kings of France." This may have been true in the case of the late Plantagenets, and their successors, but the example of the earlier Saxon monarch, Edward the Confessor, in the forepart of the eleventh century antedates them all.

Doctor: "Ay, sir; there are a crew of wretched souls
That stay his cure: their malady convinces
The great assay of art; but at his touch,
Such sanctity hath heaven given his hand,
They presently amend.
Malcolm: I thank you, doctor.
Macduff: What's the disease he means?
Malcolm: 'Tis called the *Evil:*
A most miraculous work in this good king:
Which often, since my here-remain in England,
I have seen him do. How he solicits heaven,
Himself best knows: but strangely-visited people,
All swollen and ulcerous, pitiful to the eye,
The mere despair of surgery, he cures—
Hanging a golden stamp about their necks,
Put on with holy prayers; and 'tis spoken,
To the succeeding royalty he leaves
The healing benediction."

The practice, however, was even older than the Saxon kings of England. It was employed by the Druidic priesthood and by the Skandinavian kings beyond the North Sea, before an English or Continental monarch presumed to employ it.

In later periods, it was observed that English kings, not becoming such by direct hereditary descent or the fiction of divine right, Protestant as well as any other, were as good as any to heal by their hands. Presently the practice fell into disuse. Indeed, the tables seem

to have been turned ; the monarchs of Europe, instead of curing king's evil are now themselves very generally afflicted with it.

RELICS FOR THE CURE OF SMALL-POX.

The frequent recurring of pestilence, with sweeping mortality, appears to have been a mighty agency to produce disbelief in the power of the clergy and sacred relics to ward off or heal disease. From 987 to 1060 there were no less than forty-eight deadly visitations of epidemic. About the year 1000, when Europe was in terror from the expectation of the Day of Judgment and end of the world, the calamities were dreadful. The very order of the seasons seemed to have been inverted, and new laws imposed upon the elements. "A dreadful pestilence made Aquitaine a desert," says Michelet : "The flesh of those who were seized by it was as if struck by fire, and it fell rotting from their bones. The high roads to the places of pilgrimage were thronged by these wretched beings. They besieged the churches, particularly that of St. Martin's at Limoges, and crowded its portals to suffocation, undeterred by the stench around it. Most of the bishops of the South repaired thither, bringing with them the relics of their respective churches. The crowd increased, and so did the pestilence ; and the sufferers breathed their last on the relics of the saints."

RELIGIOUS REVOLUTIONS.

During the next few years, worse evils followed, almost too horrible for description. All Europe and the East were scourged by famine and mortality. The

strong preyed upon the flesh of the weak, children were decoyed away and slain for food, and the very wolves neglecting the corpses of the dead, appeased their hunger upon the bodies of the living.

Men abandoned their sins and sought shelter under the shadow of religion. The brigands that thronged the various countries resolved upon amendment of life, promising solemnly at the confessional to abstain from the plundering of travellers when these were journeying under the protection of priests or monks. The rich, desirous to expiate their sins and easement, built costly church-structures ; kings and dukes were eager to abandon their thrones and seek repose in cloisters. Lands, houses and slaves were bestowed upon the Church, and often to the credit of the penitents the latter were set free. The new Roman Pontiff, Gerbert, now Sylvester II., had been a student of profane learning at Barcelona, and as was affirmed, of mathematics and occult literature at the university of Cordova. Many esteemed him a magician, and hated him for his great attachment to the German Emperor, Otho III., who had been his pupil. He now insisted upon a crusade, a century before the rise of Peter the Hermit.

The world had been full of disorder. The Emperor had interposed his authority at Rome, taking from its Senate and people the power to elect the Pontiff, and exercising it himself. It was not so, however, for a long period. The Church, as denoted by its rulers and to the exclusion of the commonalty, became incarnate, created anew, and the umpire of Christendom in the person of the carpenter's son.

This was Hildebrand, the son of the flame, the Christian Bacchus, a Benedictine monk from Clugny

in Burgundy. For twenty years he had ruled as chancellor in the Roman councils as the adviser of Pontiffs and Senators, the power behind the Episcopal throne. He was able to procure the absolute prohibition of marriage among the clergy, the vesting of the elections of the Roman bishop in the College of Cardinals, and what was more, the supremacy of the ecclesiastical authority over the Imperial, and so eventually over Christendom itself.

MEDICINE MADE A DISTINCT VOCATION.

After this period the purpose sprung up to dissever the practice of medicine and surgery from the religious profession. The bishops and arch-deacons, were forbidden in the next century, to prescribe for the sick; but the lower clergy were only restricted from surgery. Up to this time, and afterward, Christian physicians were celibates, and only unmarried men were permitted to engage in practice. It was accordingly not an easy task to separate the two professions. It required a century of councils, and even threats and disabling censures. Many notable ecclesiastics were eminent as practitioners. Thieddig, of Prague, who had studied at the university of Salerno, was physician to the King of Bohemia; Hugo, an abbe of St. Denis, was medical adviser to the King of France, and others were equally distinguished. As late as the fifteenth century, John Arundale, afterward bishop of Colchester in England, was physician to Henry VI.; and other monarchs employed the medical services of abbots. The famous Peter Abelard taught medicine and allowed the nuns in his convent to practice surgery. Hildegard, of the convent at

Rupertsburg, was one of the number. She was widely known and honored, and for her medical services, her revelations and miracles, she was canonized as a saint. She prepared a Materia Medica of decidedly original character, directing, among other things, the use of common fern for persons bewitched, herring for the itch, and water-mint for asthma. Considering the age, and the notions of medicine then current, she was a physician of superior merit.

THE MEDICAL SCHOOL AT SALERNO.

"The first medical college established in Europe," says Professor J. W. Draper, "was that founded by the Saracens at Salerno, in Italy." Other writers, however, with plausible reason, assign to it another origin. Dunglison gives the credit to the monks. "Medicine assumed a more imposing attitude," says he, "when the Benedictine monks turned a more particular attention to it, and established two celebrated schools—the one at Monte-Cassino, the other at Salernum." Billroth conjectures that the institution at Salerno was founded under the authority of the Emperor Charlemagne in 802; but Dunglison seems to give it an earlier date, declaring that it was already celebrated in the eighth century, as regarded the healing art. This appears to be confirmed by the fact that the city was the seat of a Benedictine monastery in the seventh century,and that some of the prelates and higher clergy were distinguished by learning and medical acquirements. In 984 Adalberon, bishop of Verona, repaired thither for remedial treatment, but not to any considerable advantage. "At that period," says Dunglison, "they endeavored to cure the sick by prayer only."

The Saracens from Sicily and Spain held parts of Southern Italy; and being the chief, almost the only promoters of learning in the world, their influence at Salerno was decisive. "It has by recent researches been clearly established," says J. F. Payne, of London, "that the celebrated *Schola Salernatina* was a purely secular institution. All that can be said with certainty is that a school or collection of schools gradually grew up in which, especially medicine, but also, in a subordinate degree, law and philosophy were taught." A school established by the Saracens would be very sure to be of such a description.

In the ninth century, the physicians of Salerno had become distinguished, and the city was often called *Civitas Hippocratica*. Many august and royal persons resorted thither in the next century for the restoration of health. William of Normandy was a patient, some years before his invasion of England. The crusaders, after making it their sanatorium, helped bring it into notice. The students in attendance were numerous, and no distinction was made in regard to race, religion, or even sex. The wives, daughters and other disciples of the professors were equally privileged to receive instruction and themselves to serve as lecturers and preceptors. The most noted was Trotula, in the eleventh century. There were also many Jews in attendance as students and probably teachers. The school continued to flourish till the founding of the universities of Naples and Montpellier in France led to its decline. It was not closed till 1811, by the order of the Emperor Napoleon.

The doctors of Salerno won deservedly high reputation. At a time when Moslem learning was excluded from many parts of Europe, they furnished a medium

for its transmission. In their medical practice and theories they chiefly followed Hippokrates and Galen, as well as the Methodists and Empirics, making use of diet and regimen in preference to medicine. They also gave great attention to clinic instruction in the hospitals. Anatomy, curiously enough, was chiefly learned by demonstrations upon the bodies of swine, and one of their writers, Copho, actually wrote a treatise entitled *Anatome Porci.* The moral analogy, it would seem, might have been somewhat more easily traced, but the physical seems to have answered them very well. Among the books compiled at Salerno were a great number of poems on medical subjects. The fact is, doubtless, that medical men are often prone to give great latitude to the fancy. One of these works, entitled *Regimen Sanitatis Salerni*, written "for the use of the King of England," in doggerel rhyme, had an immense circulation, was translated and reprinted in different European languages in one hundred and sixty editions. A Medical Compend or *Practica*, by Joannes Platearius, was also reprinted several times, and the *Antidotarium*, a collection of formulæ for compounding medicines, by Nicolaus Præpositus, was very generally esteemed, and became the basis for many works compiled by later writers. Gilles de Corbeil, first a professor at Salerno, and afterward physician to King Philip Augustus of France, composed several poems in Latin hexameters, on medical subjects. Two of these, one on the urine and the other on the pulse, were highly esteemed in professional circles. After the philosophic doctrines of Averroes were generally accepted, there sprang up a great demand for Arabian works on medicine and metaphysics. The conquest of Toledo by Alfonso

brought Christendom into more immediate contact with Moslem learning. With the impulse thus communicated, Jewish physicians, often under the patronage of bishops, became active in translating the medical and philosophic books into different European languages.

About this time an enthusiasm for the revival of learning prevailed, and universities were founded in several countries. The Emperor of Germany, Frederick II., himself a proficient scholar in languages and natural history, liberally endowed the school at Salerno and established similar institutions at Naples and Messina. He made provision that the professors should receive an income for their maintenance. He also maintained poor students from his own purse. So celebrated was he for his love of knowledge that, as in the case of Charlemagne, whom he greatly resembled, the Eastern Moslem princes emulated each other in sending him artistic works as tokens of their friendship. The Sultan of Egypt presented him with an extraordinary tent, in which effigies of the sun and moon revolved, moved by invisible agents, and showed the hours of the day and night in just and exact relation. His chancellor, Pietro de Vincis, was a physician, and compiled a code of laws for the Neapolitan dominions. He also wrote the first sonnet extant in the Italian language.

Under these influences the practice of medicine was included under the regulations of the Imperial Code. Physicians were obliged by it to learn anatomy before everything else; they were required to study diligently the writings and doctrines of Hippokrates and Galen, and were not allowed to practice their profession till they had received from the Board of Faculty at

Salerno and Naples a satisfactory and honorable certificate, besides which they were obliged to pass an examination before the Imperial Chamber, formed of a committee of persons selected as examiners. The restrictions, however, soon fell into desuetude. Queen Giovanna, of Naples, attempted to establish them anew, but it was not successful.

Universities were founded at Bologna and Padua, which became distinguished; the former adhering to the Galenic tradition, and the latter accepting the doctrines and reasoning of Averroes. The Jewish Rabbis, among the foremost promoters of liberal knowledge, opened schools at Montpellier, Nimes and Carcassonne, where medicine and other branches of learning were taught as at Salerno and Cordova. Indeed, the university at Montpellier, from the time of its establishment, with instructors from Spain deeply imbued with the philosophy of Averroes, became distinguished for the practical and empiric character of its teachings, which were in marked contrast with the scholasticism of Paris and other universities. It was equally celebrated for liberality and catholicity. Jews, Moslems, Albigeois and other Christians of the Semitic, Iberian and Gothic races taught and studied together; and from that time its prestige increased, while that of Salerno declined. Here degrees were conferred; we now witness the titles of Bachelor, Licentiate and Master conferred upon the students in the various grades of progress. The Jews and Nestorians of the East had also used academic distinctions; the Arabians had continued them, and the School of Salerno likewise employed them. Only the teachers, however, were styled doctors, which term has simply that meaning; but after a time, the desig-

nation was bestowed instead of "Masters," although not correctly, and hardly in good taste.

THE UNIVERSITY OF PARIS.

At Paris in the twelfth century, the faculty of the university had separated from the School of Parvis Notre-Dame, and it was now the most distinguished institution of learning in the European world. Literature is the immortalizing of doctrine and thought, as well as the awakening consciousness of national existence. The dialectic exercises at this institution were the grandest of intellectual gymnastics. From fifteen to twenty thousand students were sometimes in attendance. In the thirteenth century it sent forth seven Roman Pontiffs, and more cardinals and bishops than can be easily enumerated. Raymond Lully and Dante went thither to sit at the feet of Duns Scotus; and Roger Bacon, at once a physician, philosopher and occultist, graduated there in 1240.

There now arose a heated controversy between the University and the religious orders. The King of France, Louis IX., took the side of the clergy. His reign is marked by the establishment of the Gallican Church, by the war of extermination against the Albigeois, and his two crusades into Egypt.

In that century, also, many believed the final catastrophe of the earth immediately impending. The Mongols from ancient Skythia were deluging China, India and Russia; they overthrew the khalifat, destroyed Baghdad, penetrated Germany clear to Moravia, even devastating ruin itself. The general of the Franciscans had promulgated a book entitled *Introduction to the Everlasting Gospel*, suggested by an expression

in the *Apocalypse*, in which it was declared, that as the Old Testament had been superseded, so would the New, being of the letter only, be replaced by a more lasting evangel of the spirit and higher intellect, the *Gospel of the Holy Ghost.*

EVOLUTION OF THE THEATRE.

In this period the modern drama had its birth. Priests and monks taking the parts, acted in the chapels the various scenes and events recorded in the New Testament. Here Dante drew the inspiration for his *Divine Comedy.* The secret worship of the ancient world was dramatic, and from the Bacchic religion the theatre had its beginning. The church in like manner gave the modern theatre its inception. Art means action, drama embodied in architecture and symbolic observances. In this general upheaval Free-Masonry from the East likewise spread its lodges over Europe.

THE UNIVERSITY AND THE CLERGY.

The controversy between the University and the clergy was carried on with a fierce campaign of pamphlets. It was finally submitted to the Roman Cusia for arbitration. At the instance of Thomas Aquinas, "the Dumb Ox from Sicily," an equivocal course was adopted. Guillaume de St. Amour, the champion of the University, was publicly condemned, but the promulgator of the new Gospel received a less open censure. An order was given by the Pontiff to suppress the book quietly. The doctors of the University, however, burned it in the presence of the people at the Parvis Notre-Dame.

THE COLLEGE OF SURGEONS.

In the course of these conflicts, Jean Pitard, the physician and confidant of the King, whom he had accompanied in the Crusades to the Holy Land and Egypt, obtained authority from him in 1271, and founded the College of Surgeons, with St. Cosmo and St. Damiani, for patron saints. He taught surgery regularly for many years, not with any superior ability, but opening the way for others after him. Lanpanchi of Milan, a *medicin chirurgique*, or lay physician practicing surgery, had been compelled by political changes to leave Italy. Coming to Paris he entered upon a career of high distinction ; and his great work, *Grand Chirurgie*, was the text-book at the college for a century.

FAMOUS ITALIAN TEACHERS.

From this time onward medical instruction was promoted and encouraged in the various universities of Europe. The misgovernment at Bologna had disgusted other teachers and students, as well as Lanpanchi, and the schools at Naples and Padua had grown into distinction in consequence. Roger of Parma became a professor and finally Chancellor at the University of Montpellier, and afterward made his countrymen acquainted with the writings of Abulkasim.

The professors at Bologna, nevertheless, maintained their high reputation for scholarship. They were more liberal in their sentiments, less circumscribed in their views by tradition, and possessed of superior professional enthusiasm. So great was the perfection to which the medical art had attained, that the

instruction had become divided, and these professors were classified as physicians, surgeons, physicians for wounds, barber-surgeons, oculists and others.

Gulielmo de Saliceto, the preceptor of Lanpanchi, was regarded as the best instructor of his time in medicine, surgery and pathology. Like the late professor Agassiz, he vigorously enforced upon his hearers the importance of diligent and critical observation as the only sure way to acquire thorough knowledge. To the study of books he ascribed only a subordinate value. Rolando of Parma also became noted for his explorations and improvements in surgical pathology.

ANATOMY FIRST TAUGHT BY DISSECTION.

The most startling innovation, however, was made at Bologna in 1315, by Mondino de Luzzi. Before that time religious prejudice had interdicted the dissection of the human body as sacrilegious, and the public feeling thus engendered had made it perilous to the safety of the individual who would have taken the risk. The professors and students were dependent upon the nomenclatures in use, the descriptions by Galen, and the observations made by examining the bodies of animals. Mondino changed all these methods. He dissected and demonstrated the parts of the human body in two female subjects; and the next year he repeated the performance with a single subject. He compiled a treatise upon the *Anatomy of the Internal Organs of the Human Body*, which was the standard text-book for two centuries. He did so much that we are warranted in honoring him, as well as his famous pupil Chauliac, for opening new and broader fields for exploration. Nevertheless, dogs will bay the moon, and there are

men who take pleasure in criticising and depreciating others more exalted than themselves. Mondino was impugned as a copyist of Galen, and for making use of the teaching and terminology of Razes and Avicenna. Doubtless he was too much absorbed in his own researches to spend time and energy in devising other phrases and methods; and certainly there was much that he did not know, and which, perhaps, others after him have not found out. It becomes the lover of real knowledge to seek to profit by what has been ascertained, rather than to waste time and temper on apparent omissions.

It is true enough, however, that in our time and with the vocabulary and opinions now in vogue, the classifications and descriptions of Mondino have a curious sound. He divides the body into three cavities: the upper one, the head, containing the organs of the animate nature, the middle one or thorax containing the psychal organs, and the abdomen, containing the organism of the physical nature. In this arrangement he agrees very closely with the philosopher Plato in the *Timaios*. His plan of explanation is peculiar. He begins at the lower region of the body to describe the cavities and their contents, and proceeds in due course to the head. The intestines are enumerated in six divisions. The other parts are also carefully set forth more or less accurately. He discusses the shape and distribution of the tissues and membranes, mentioning the disorders to which they are respectively liable. The names employed are often Arabic or a mongrel Greek, somewhat after the modern fashion, as *siphak* for the peritoneum, *zirbus* for the omentum, *eukharus* for the mesentery, *monoculus* for the cæcum, *chilis* for the vulva. He gave a very correct

description of the heart, which contains the rudiments of the theory of the circulation of the blood.

After Mondino came Nicola Betrucci, Pietro del Corlata and others who won honorable distinction in the same field. From this time it became the practice in the several universities of Europe to teach the structure of the human body by ocular demonstration. It was the practice to employ a barber's assistant to dissect in advance the organs and tissues required for the lecture, using his razor for the purpose. The professors of anatomy would then read the description to the students from the text-book of Mondino. The statutes of the rival university at Padua prescribed that its lecturers should adhere to the literal text of this work.

THE OTHER DEPARTMENTS.

In respect to medicine and surgery, little change or improvement occurred during this period. A few shining lights appeared, but they were ineffectual to dissipate the darkness prevailing over Europe. John of Arden flourished in England in 1360, and achieved distinction by skillful operations for fistula, and for adding the centre-pin to the trepan. Like a true surgeon, he was not eager to resort to instruments, but insisted that trephining should be limited to the severest forms of injury to the head. His writings, it is quaintly remarked, were written with simplicity and honesty.

LOW ESTATE OF SURGICAL SKILL.

Upon the continent of Europe, during the next century, surgery was "in the hands of barbers and others who could neither read nor write." Matthæus Cor-

vinus, the King of Hungary, having been wounded in battle, offered a reward in several countries for a surgeon to cure him. Johannis von Dockenbourg secured the prize. As a general rule those requiring surgical operations journeyed into the Moslem countries of Asia for the purpose. Good oculists could be found only there. The Moorish Kingdom of Granada was approaching its fall, and its schools were also in decay.

THE RENAISSANCE.

The fifteenth century was a period of transition. The darkness before the dawn began to be dispelled by gleams of the aurora. Asia was to be left in night while the sun passed over to Europe. The political map of the West underwent changes, such as had not taken place to such extent for centuries; and there came with them a new birth of art, knowledge and liberal culture.

The conquest of Constantinople by the Turks in 1453, with the final extinction of the Greek Empire, was the most important of these changes. The later Byzantine Emperors had sent men of learning as ambassadors to the several countries of Europe, to procure their aid against the common enemy. One of these, Emanuelo Chrysalore, remained a long time in Venice, and taught there publicly the different branches of learning which had been neglected and forgotten in the countries of the Western Roman Empire after its overthrow. After the fall of Thessalonika, Theodoros Gaza, a man somewhat noted for scholarship, escaped with his literary treasures to Italy. After the final subversion of the Empire multitudes of his countrymen followed his example.

Lorenzo di Medici, was then supreme in the Republic of Florence, and gave them a cordial reception. The manuscripts thus obtained now became a powerful agent to make the scholars of Europe familiar with Grecian poetry, history, philosophy and medicine.

A change was quickly perceived in the methods of learning. Latin had before been the classic speech of Europe, as well as the dialect of prayer-books and breviaries; now the scholars of Europe began to read Greek. The art of printing had been discovered at the same period, giving a fresh impulse to learning by making it accessible where before it had been excluded. Plato once sold an estate to enable him to purchase the writings of Pythagoras; now a few gold coins were ample for the purpose.

THE VATICAN LIBRARY.

Nicolas V., the son of a physician, and himself learned in medicine and other knowledge, was then Pontiff at Rome. Under him the Roman Court was thronged by men of letters, and the Vatican Library was founded. At his instance there were more than five thousand ancient manuscripts collected, and the greater part of the works of the Greek authors were translated into Latin. He also was a liberal patron of the arts, and caused the venerable monuments of the capitol to be preserved and cherished. Rome from this period became the centre of classic art and study, succeeding its fallen rival on the Bosphoros.

MASSILIO FICINO AND HIS CIRCLE.

Foremost among the leading minds of this period was Massilio Ficino. His father was the physician of

Cosimo di Medici. This great banker-statesman had met the famous Pletho and been inspired by an enthusiasm for the Platonic philosophy. He persuaded this physician who had been instructing the son in medicine, to let the young man give his attention to the study of Greek in order to translate the writings of Plato. Thus "that Platonic Academy was founded which led to such important results in the history of Italian philosophy and letters."

In Massilio Ficino the two historic currents of thought were blended together. He was an ardent student of the past, seeking to know civilization and mental culture in their sources, and at the same time he was receptive of inspiration from the spirit of the times in which he lived, and the illumination then coming over the European world. Following in the path already marked out by Erigena, Aosta and Francesco Petrarch, he in a degree anticipated also the views and perception of Giordano Bruno and Tomasso Campanella.

He became an ardent receiver of the doctrines of Plato and Plotinos, whose works he translated into Latin, and he was also an eager student of the mystic teachings of the Alexandreian philosophers. Believing profoundly in immortality, he gives us the statement that he had made an agreement with a skeptic friend with whom he had discussed the matter, that the one dying before the other should make his presence known to the survivor, and that the friend had actually kept the appointment. Ficino had also an implicit belief in astrology and the Pythagorean theory of numbers declaring that he had himself the unanswerable demonstration of their truth. He entertained the notions of planetary influence that were

current among the leading thinkers of those times, and cherished by many persons not inferior in intelligence at the present day. He declared that medicines prepared when the planets Jupiter and Venus were in conjunction in the zodiacal sign Aquarius became thus possessed of a superior healing energy.

He held likewise to the philosophic notion of the *æther*—a celestial medium pervading all things, by the agency of which the Supreme Energy is incessantly operative,—in which the universe has its existence, and of which light is an affinity motion, planetary and stellar action and organic life are the outcome. Believing this, he conjectured that human beings, by some occult impartation of it to their own vital energies, might receive increase of vigor and prolong life to an indefinite duration. He also attributed similar results to preparations of gold taken internally. Similar notions are found in the works of the Neo-Platonic philosophers with which Ficino was familiar.

General demoralization now existed over Europe. The Turks menaced all Christendom, and the different countries were incessantly engaged in war or agitated by internal disturbances. The Republics of Italy were now despotic oligarchies, premonitory of final extinction. The Roman prelate, Nicolas V., also became a blasphemous despot, putting an end to the liberties of the capitol, and establishing a reign of terror, ending only by his death. Another Pontiff, Paul II., obtained a disgraceful celebrity by his persecution of men of learning. Sixtus IV., who succeeded him in 1471, was chiefly famous for his licentious amours and his numerous "nephews." His efforts for their aggrandizement led to a war with Florence and general confusion over Italy. His successors were Innocent VIII.

and Alexander VI. Under such men social dishonor and low morality generally was the natural condition of society.

Ficino remembered the declaration of Augustin in regard to Platonism, and actually contemplated the promulgation of a religious philosophy upon that basis. The proposition seems to have met with favor, and Matthæus Corvinus, the Hungarian King, considering the disturbed condition of Italian affairs, offered him a residence in his dominions and to found an *Akademeia* for the new cultus. Ficino, however, adhered to Florence as the metropolis of the new reformation, and would not, in this stress of their fortunes, abandon his patrons, the Medicis. Soon afterward, with a singular vacillation, he took orders in 1473, at the age of forty, and officiated for twenty-six years as a priest.

He left an immense amount of manuscript at his death, both original works and translations. His writings upon medicine were voluminous, besides the scores of treatises which he prepared upon morals, theology and metaphysics. Philosophy owes him much.

Among his numerous admirers was the famous Pico della Mirandola. This great scholar was in close sympathy with his philosophic utterances, but appears to have discountenanced his extravagances in other directions. Reasonable as this dissent may appear to us at the present time, it was little short of being revolutionary at that period. Certainly it was significant of the change then going on in the minds of the scholars and thinkers of Europe.

The Chancellor Gerson wrote a book in which the dogmas and pretensions of the medical astrologists

were condemned. He seems also to have held the peculiar notions of the theurgists at a low estimate.

Afterward, the University of Paris, more distinguished for scholastic learning than for social morals, added its condemnation, and astrology presently became an heretical belief.

The celebrated Dominican monk, Savonarola, had been warmly esteemed by Ficino, but the revolution in Florence which overthrew the power of the Medicis, the patrons of Ficino, had been promoted by him and produced an estrangement. Savonarola was a zealous adversary of the current philosophic doctrines, and assumed to possess prophetic gifts. Venturing finally to attack the corruptions then in the ascendant at Rome, the Pontiff, Alexander VI., retaliated by causing him to be condemned and burned alive as a heretic in May, 1498.

OTHER ITALIAN TEACHERS.

Italians appear to have been the principal teachers in the fifteenth century, who attempted to elevate the knowledge and character of their profession. Bartolomeo Montagnano taught anatomy at Padua, opening fourteen human bodies for his studies. Saladin, of the university at Naples, wrote a treatise upon Materia Medica and Pharmacy. Leonardo Bertapaglia, professor at Padua, published a commentary upon the fourth book of the *Canons* of Avicenna. It was an honest endeavor to elevate his calling above the level of barber-surgery, but had no great merit otherwise, except for its exquisitely classic style.

Three other surgeons, Vincentio Vianco, Branco and Bogani, achieved distinction as the first who attempted

and successfully performed the rhinoplastic operation. They cut a piece of flesh from the arm of the patient, leaving only a few fibres attached, adapted it to the shape of the nose; then kept the raw surface in contact by binding the limb across the face, and finally, when the adhesion was complete, cut the part entirely away from the arm. Gaspardo Tagliacozzi, afterward improved the method by taking the flesh from the biceps muscle. He used to declare in his enthusiasm that the new nose sensed odorous bodies more perfectly than the natural organ.

Alessandro Achillini, of Bologna, was both the pupil and assistant of Mondino, and bore a high reputation both as a physician and a philosopher. He lectured on medicine and philosophy at the university and bore the designation of the "Second Aristotle." He adhered to the school of medicine then in vogue and did not subscribe to the "new learning." His ability, however, rescued him from the opprobrium which it has become fashionable to cast upon the disciples of the Arabian schools. He discovered and described the two bones of the ear, the *incus* and the *malleus*, the seven bones of the *tarsus*, the course of the cerebral cavities into the inferior cornua, and likewise gave very accurate accounts of the large and small intestines, exhibiting greater proficiency than any who had preceded him. He was the author of several works on anatomy, and his philosophic writings were printed in a single folio volume in 1508.

Germain Colot, a French surgeon in favor with Louis XI., had chanced to witness the operation of lithotomy at Milan, and made experiments himself, first upon a dead body and afterward upon a condemned criminal. His success had a powerful influ-

ence in establishing the operation amongst surgical practitioners. The principal apparatus for the purpose, however, was handed down as a secret, the property of the family, till the time of Ambroise Paré.

WRITERS ON ANATOMY.

Another writer of some merit was Matteo of Gradi. He published a work on anatomy, in which the structures of various parts of the body were treated and the ovaries were correctly described.

Gabriello de Zerbi, of Verona, was another aspirant for the highest honors as a teacher. He assumed the title of *Medicus Theoricus*, or the Medical Seer, and published a work upon anatomy as his own original discovery. Hardly an epoch in medical history ever passes in which some vociferous person does not appear, with similar bombastic pretensions of being the wise one, compared to whom all others are of small account. Apart, however, from Zerbi's consequential style and affectation of superior ability, his chief excellence consisted in his skill as a dissector and his actual observations of the structure of the eye and the olfactory nerves.

INTRODUCTION OF METALLIC MEDICINES.

The practice of medicine, so far as it was exercised by ecclesiastics, was principally carried on by monks of the Benedictine order. About the year 1450, one of these, Basil Valentin, a German, introduced various metallic substances into the list of remedies. Like other physicians of the time he was a student of alchemy, which he appears to have interpreted in the

exoteric and physical sense. Beginning with antimony he tested it on his brother celibates with results so untoward that they gave it the uncanny name which it still retains, as deadly to monks. Despite this unpropitious beginning, and the fact that inorganic substances are not accordant to the physical organism, the drug continues to be held in esteem. Valentin also discovered the volatile alkali and its mode of preparation from the chloride of ammonium, the use of mineral acids as solvents, the production of ether from alcohol, and the tonic properties of sulphate of iron.

DISEASES OF THE FIFTEENTH CENTURY.

The destruction of the Eastern Empire by the Turks, put a summary end to the commerce between European countries and India. The ancient accounts of successful voyages round the southern extremity of Africa, suggested expeditions from Europe to ascertain the possibility of making a new route for trade by that direction. Columbus, taking inspiration from the early discoveries by Irish and Icelandic adventurers of a continental region south from Greenland, conceived the project of a direct way to India across the Atlantic, and succeeding in reaching the West Indies. Sebastian Cabot was more successful, rediscovering the Continent in the Western Hemisphere where the Northmen had ventured before him.

New diseases appeared with these occurrences. Scurvy, which is said to have been first noticed by German writers in 1482, made fearful ravages among the sailors accompanying Vasco de Gama round the Cape of Good Hope. It broke out repeatedly in other crews making long voyages, and the medical art was

without a remedy. Finally, however, in 1564, a cure was found out by accident, outside the profession. A Dutch vessel crossing the Bay of Biscay fell short of provisions, and the sailors resorted to the use of the lemons and oranges in the cargo. To their joyful surprise, those of their number suffering from scurvy speedily recovered. The credit, however, of introducing lemon juice as a remedy for scurvy was duly promulgated by a medical writer at a later period as his own discovery. It has latterly been found to be a remedy for small-pox.

The "Sweating Sickness," broke out in England in 1485, with a fatality like that of the Black Plague of the preceding century. It appears to have been similar to the miliary fever, a filth-disease of the Continent, and indeed is still familiar in India. Nowhere, however, does it seem to have so great a mortality as in England; and in later years, when it was carried by the routes of commerce across the North Sea, it was characterized by the peculiarity of attacking Englishmen with special severity. When the Earl of Beaufort, afterward Henry VII., invaded England to wrest the crown from Richard III., the disease appears to have existed among the soldiers and adventurers accompanying the expedition. Soon after he had debarked, the pestilence broke out with terrible violence. Most persons who were attacked by it died within twenty-four hours, hardly one in a hundred surviving. These were for a long time in great danger of relapse. Many towns lost half their population from this epidemic. There were several recurrences of the visitation during the next century. Since that period, however, it has, like Asiatic cholera in later years, small-pox and typhus, succumbed to the beneficial

influence of more wholesome ways of living, greater cleanliness and hygienic precautions, and has lost much of its terror.

In Italy morbus petechialis prevailed.

SYPHILIS.

The most terrible pest of this period, however, was syphilis. Known by older writers, it now seemed to have assumed a type and malignity never equalled before. As it appeared about the time of the return of the first expedition of Columbus from the West Indies, many declared that it had been brought from the New World. It was first noticed, however, during the invasion of Naples by Charles VIII., King of France; and designated the *Souvenir de Naples*, and the Neopolitan disease. To assign it to either source is absurd. It was partially described by Abulkasim and Avicenna, and afterward by Gulielmo of Salicetta in 1280. The Alexandrian Hebrew, Jesus, seems to have known of it. "He that sinneth before his Maker," says he,* "let him fall into the hands of the physician." The author of the Thirty-eighth *Psalm*, however, is more explicit. "There is no soundness in my flesh; no peace in my bones, because of my sins," he declares with a sad wail. "My wounds are noisome and corrupt because of my foolishness. I am wretched and bent completely down; I go moaning the whole day. My loins are full of inflammation, and there is no soundness in my flesh." The disease of the first King Herod of Judæa, as described by Josephus, appears to have been the same malady, and Apiôn whom the same writer denounces, had a similar complaint. After the

* *Ecclesiasticus*, xxxviii., 15.

famous outbreak in Naples, the pest was carried from country to country, raging with fearful violence for forty years. It was regarded by many as epidemic; and it leveled all distinctions of rank and fortune, assailing with terrible impartiality the king, the nobleman and the peasant; the pontiff, cardinal, priest and layman. It passed in its fell course from Naples to Spain and France, thence to Germany and England, onward to Poland and Skandinavia, and from Poland to Russia. The State of Wurtemburg seems not to have been visited till 1538. It extirpated about a fourth of the population of Europe. The philosophic investigators in pathology may determine for us the extent to which this plague has left its vestiges in the human family, inducing deterioration of stamina, and leading to the development of a numerous category of ailments that would otherwise have been unknown or of little importance.

MERCURY ADOPTED AS A REMEDY.

To the empirical experimentation with this complaint we are indebted for the introduction of mercury into Western medicine. It had been in use for ages in China and Eastern India. The *Materia Medica* of Chun-Sin recommends quicksilver and native calomel to destroy worms; and the knowledge of the drug was probably brought from thence by some of the European navigators. The first employment of the article was in Italy in 1497; chiefly, it would seem, however, as an external application. Berenger de Carpi generally receives the credit of beginning this mode of treatment. He speedily became famous, and in a single year acquired a net income of six thousand

pistoles. His patients were compelled to give him the sums which he demanded, and there was no end to the wealth which he accumulated.

How he came to entertain the surmise that mercury might be specific in this complaint has been variously conjectured. It was most probable that he was, like other physicians of the period, a dabbler in alchemy. This was simply a mysticism in which mercury denoted a pure or awakened conscience by the operation of which the whole mind and heart became cleansed from evil. De Carpi doubtless interpreted this literally, and so endeavored with the metal itself to eradicate this most foul of virulent animal poisons.

A prominent physician of Edinburgh remarks that syphilis in the United Kingdom at the present moment is in the stage of an epidemic in its decline. It is, he adds, the case with all infective diseases. This may be fortunate, for there are surgeons professing to believe in the propriety, if not the necessity of inoculating the healthy with the virus of the disease as a prophylactic, as others advocate the infecting with other noisome ailments. Perhaps, if syphilis is really declining, the mercurial remedies will likewise go out of fashion, and so give the human family good cause to rejoice at being exempted from two of its direst calamities. *Deus diem festinet.*

CLOSING OF THE MIDDLE AGES.

The fall of Constantinople was precursory of the modern cycle. A thousand years had nearly passed from the abdication of Romulus in the West till the overthrow of the surviving Eastern Empire. If the former event betokened the introduction of the Dark Ages into Europe, the latter was the introduction of a

new morning. The plunging of the Oriental world into the abyss of Turkish barbarism was incident to the passing of its Sun into the sky of the Western countries. Hence first was witnessed the Renaissance in Italy and a general awakening of the attention of the learned men of the universities. The impulse was transmitted thence into neighboring regions, and the darkness of the former ages was driven away. The adding of the Greek language to the curriculum of liberal studies, the dissemination of Greek learning among the peoples of Europe and the invention of printing were the important factors in the mental revolution. Besides, the wars, disorders and general deterioration of morals in the public policy of the nations, drove the thoughtful and well-disposed out of political life; and they sought compensation and an asylum for the conscience in literary pursuits. In fact, most revivals of learning have occurred when commonwealths had corrupt or despotic rulers.

Professor Kohlrausch thus aptly sets forth the results of the change from the Mediæval to the Modern period. "Although it may admit of dispute whether, upon the whole, we are further advanced in the arts and sciences than many nations of antiquity and the Middle Ages, the progress in the universal spread of knowledge can admit of no question and it is the noble art of printing, which, as the great lever, has effected this glorious object."

Meanwhile, the New World beyond the Atlantic had come to the knowledge of Europe. The ancient cosmology of scholars and ecclesiastics was rudely overturned. The Earth was displaced from its acknowledged rank as centre of the universe, and relegated to its former position as an attendant upon the Sun.

With all these changes, thought all through the learned world was in a ferment and there was an increased receptivity to mental illumination.

HISTORIC EVENTS.

The overthrow of the Eastern Empire, which had thus become the prelude to greater enlightenment in Europe, was also the introduction to new perils to Christendom. The Turks made their way to the Danube, with every prospect of conquering Hungary. A crusade was proclaimed against them; but the old enthusiasm was dead. The mild-mannered Frederick III. was Emperor of Germany, and could not rally the States, even for their own protection. The Roman legate, Capistran, and the Hungarian General, Johann Hunyady, however, collected forces and put the invaders to rout. Their King dying the next year, the Hungarian Diet elected Matthæus Corvinus, the son of the General to the throne. The new monarch set himself at once to the encouragement of learning in the country. He founded the university of Buda, and offered to Ficino to establish a school of philosophy and the liberal arts. But the great Italian scholar was vacillating, and did not accept the proposition.

Maximilian I., the son and successor of the Emperor Frederick, was perhaps the noblest representative of the Age of Chivalry. He was distinguished above his contemporaries for personal bravery, enthusiasm, and love for adventure. While yet only archduke, he had married the daughter of Charles the Bold, on her own choice, she never having seen him. He came to the imperial dignity at a time when the countries of Europe were governed by kings and lords, both

spiritual and temporal, who had adopted the methods of modern diplomacy, esteeming treachery as sagacity, and esteeming honor as nothing. Maximilian was a man of the former time; he was sincere in his dealings with others and scrupulously kept his word and faith. He was accordingly often overreached.

Germany, by the old constitution, was at that time the arbiter of the sovereigns of Europe. Maximilian set out to perform effectively the functions of this office by first perfecting the organization of the Empire and providing for the more equable administration of justice; and afterward by uniting Christendom for a reform of morals and religion at home, and for protection against the Turks. He even entertained the project of being himself elected to the pontifical chair at Rome.

He was a passionate lover of knowledge; actually aiding learned men, and finding time himself to compose several books. Thus, in every way, while apparently unsuccessful in much that he attempted, he opened the way for the new period. He was gentle and merciful, truly the prince, the pure-minded hero, the scholar, the gentleman—in short, all that makes up in the noblest sense, the man.

"With Maximilian as their last representative," says Professor Kohlrausch, "the Middle Ages passed away; a new period, of which the germ had been sown, now gradually developed itself and became established."

ENGLAND AND FRANCE.

In England the conflict between the royal houses of York and Lancaster had resulted in the extermination of a large part of the nobility, as well as of the princes

of the blood. Henry VII., of the new dynasty of Tudor, a monarch in every moral and other characteristic the reverse of Maximilian, was king during the period of transition. Guided by sordid avarice, he sacrificed the opportunity offered him by Columbus, and then meanly, but with results fortunate for us, won the right of discovery through the enterprise of Sebastian Cabot.

Meanwhile, learning had received a new impulse at the universities. Richard III., during his brief reign encouraged the liberal arts, and after his overthrow the scholars at Oxford and Cambridge continued the movement.

France was in no respect behind. The university at Paris, as well as the institutions of the South, had been among the foremost to accept the new order of things. With the accession of Francis I., Henry VIII. and Charles V., the Modern Times had begun.

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CHAPTER IV.

MEDICINE IN THE RENASCENCE.

MEDICINE was among the later of the arts to participate in the mental revolution which superseded the Dark Ages. Having been taught in conjunction with metaphysics and the occult learning denominated *mathematics*, the first endeavors to let in the new light were equally directed to the several departments of knowledge usually taught in the schools. Thus we have observed that Ficino, who was foremost in the restoration, and those who sympathized with him, directed their efforts chiefly to philosophy as the nucleus around which the new thought should collect. "It was at first very naturally supposed," says Dr. J. F. Payne, "that the simple revival of classical, and especially of Greek literature, would at once produce the same brilliant results in medicine as in literature and philosophy. The movement of reforms started, of necessity, with scholars rather than with practicing physicians—more precisely, with a group of learned men, equally enthusiastic in the cause of letters and of medicine."

When a breach with former notions and modes of thinking takes place, the neophytes are often vigorous in denouncing, with little or no discrimination, what had been believed. Thus, in earlier centuries, the

learning of the East was denominated *magic* and the term made opprobrious, while those who cultivated knowledge were stigmatised as sorcerers. The Albigeois, Waldenses and early reformers in religion were alike so denounced. A person or sentiment made odious is half overcome. The pursuit of knowledge was thus transformed from wisdom-craft to witch-craft and denominated the "black art."

In a similar temper the leaders of the Renascence discarded the medical literature of the Middle Ages as barbarism, and scouted the writings of the Arabians as profane, if not actually worse. In Spain, where the Christian and Moslem faiths had been in immediate collision, the death-penalty, under religious auspices, was sometimes inflicted upon such as studied them.

The Italian professors, however, adopted the more judicious policy of leading medicine back to its earlier sources. They substituted the writings of Hippokrates, Galen and other eminent physicians for those of the Arabian authors. Few scholars, however, had any knowledge of the Greek language, and even few physicians were learned men. It was necessary, therefore, to begin by the translating of those works into Latin, then the common language of scholars in all European countries.

RESTORATION OF THE HIPPOKRATIC DOGMA.

The first to engage in this undertaking was Nicola Leoniceno. He was a native of Vincenza, and for upward of sixty years a professor in the universities of Padua and Ferrara. He had become an accomplished Greek scholar, and now made a translation of the writings of Hippokrates, which he was assiduous

in explaining in his lectures. Fortunately he was an eclectic and not a bigot or even a dogmatist in his beliefs. While enthusiastic in his devotion to the "new learning," he was also conscientiously diligent in selecting from the doctrines and practice of the Arabian physicians whatever he regarded as true and beneficial. He was followed by Giovanni de Monti and others.

Hippokratic Medicine was now speedily carried from Italy to France, where it became the leading school. Johannis Günther, of Andernach, for some time a professor in the Faculty at Paris, made a "new departure" by translating the works of Galen and Hippokrates into French. Fernel, another eminent representative of the school at Paris, wrote a treatise in refutation of the humoral pathology as set forth by Galen, and first suggested the doctrine of "solidism," afterward propounded and taught by Hoffman and his school.

Lommius, a disciple of Fernel, practicing medicine at Brussels, also published a work in Latin, entitled *Observationes Medicales*, which enforced the doctrines of Hippokrates. Botal, likewise a student of Fernel, and chief physician to the kings, Henry II. and Charles IX. of France, attained distinction by his recommendation of profuse blood-letting, in which he was hardly surpassed by the famous Sangrado. His contemporaries, Duret, Piso and Holler, also warm admirers of Hippokrates, were more cautious and conservative in this respect, adhering more closely to the Hippokratic teaching. They wrote ably upon prognosis and other practical topics.

After these writers there followed a multitude of redactors, scholiasts and commentators, who devoted themselves to elucidations of the doctrines of Galen

and Hippokrates, citing them as oracles not to be questioned or doubted. Prominent among these were Zwinger of Basel, who wrote on practical medicine; Mercurialis, who published a work upon the *Gymnastics of the Ancients*, and also Amato Lusitano and Prospero Alpino, the author of a treatise on the *Medical Art among the Egyptians*.

Giovanni Argentino, a physician of Piedmont, who taught in the universities of Pisa, Naples and Turin, was distinguished as a reformer in the methods of teaching. He insisted strenuously upon the old Empiric doctrine that observation and experience constituted the foundation of all rational instruction in medicine. He found supporters in several of the principal universities, among them Joubert and Rondelet, of Montpellier.

THE "NEW LEARNING" IN ENGLAND.

The turning-point in English history began with the Tudor dynasty, and the modern age was fairly introduced when Henry VIII. came to the throne. This king, who was neither hero, saint, nor monster, but a man with many faults, was both able and popular. He was of versatile ability, skillful in engineering, music and literature, well read in theology, and attentive in the observance of religious duties. He succeeded in war and soothed down insurrections at home by forgiveness. For thirty-six years of his reign he was regarded abroad and in his own dominions as a model king. He was among the best physicians of his age, and established medicine and surgery on new foundations. He was a warm friend to men of learning, and his encouragement gave a new impetus to the efforts for disseminating knowledge.

He made choice of the celebrated Thomas Lynaker for his physician, and continued his favor and patronage without interruption. Lynaker was a native of Canterbury, and is distinguished as the first English scholar who wrote in the Latin language. He had been instructed in Greek learning by William of Selling, and entered the university of Oxford in 1480, becoming a Fellow of All-Souls' College four years later. Accompanying his preceptor on an embassy to Italy, he entered the university at Bologna under Poliziano. Among his fellow-students were the sons of Lorenzo de Medici, one of whom was afterward the pontiff, Leo X. Lynaker subsequently received the degree of Doctor in Medicine at the university of Padua, and returned to Oxford. Here he appears to have been better known as a philosopher than as a physician. He translated the works of Aristotle into Latin, and also those of Galen ; and several writers affirm that he also made a Latin version of Hippokrates. He formed one of a circle of distinguished scholars who were active in the promoting of classics and philosophic learning. In 1501 he was appointed tutor to Arthur, the Prince of Wales, upon whose death he engaged in the practice of medicine in London. After the accession of Henry VIII., and his appointment as physician to that monarch, he speedily became the acknowledged head of his profession in England. Among those who consulted him were Cardinal Wolsey, Archbishops Warham and Fox. Some years later he took orders as a priest. He resumed literary pursuits, and prepared a Greek Grammar for the use of the royal princess Mary.

Conscious that he was the member of a learned profession rather than of a mere bread-winning craft, he

recognized his indebtedness to it by efforts to promote medical study in England. He employed his vast fortune to establish a chair of Greek medicine at the University of Oxford, and also began the foundation of the Royal College of Physicians in London. He was aided by the King in this enterprise, and the institution became the model of similar ones in other countries.

Before this time the authority to license physicians in London had been exercised by the bishops, and generally leechcraft had been carried on by priests. It was afterward vested in the College of Physicians.

"DOCTOR CAIUS."

John Kaye, a native of Norwich, succeeded to the work so auspiciously begun by Lynaker. It is hardly necessary to remark that he was the "Doctor Caius" whom Shakspere has commemorated in "The Merry Wives of Windsor," it being a fashion of scholars at that period to give their names a Latin or Greek form. He was a ripe scholar, having studied medicine and the classic languages in Italy. He founded the medical college at Cambridge, and was the author of several works. Two of his treatises describe the fifth outbreak of the "Sweating Disease" in England in 1551. One of them was in English and entitled, "*A Boke or Counseill Against the Disease commonly called the* SWEATING DISEASE," and the other in Latin having the name "*De Ephemerâ Britannicâ.*" He gives the remarkable statement that this disease, so mortal in England, did not extend to Scotland, but passed over to Calais, Brabant and other places, affecting Englishmen but not the natives.

BERENGER DE CARPI.

The "greatest discoveries which occurred during the sixteenth century" are ascribed by many writers to Berenger de Carpi. He was a native of Modena, and for many years a professor at Bologna. He excelled as an anatomist, dissecting more than one hundred bodies, and making several discoveries in regard to the internal structures of the body. Sprengel also gives him the credit of having made several improvements in surgery. His introduction of the use of mercury in syphilis has already been mentioned in the preceding chapter. He was a zealous worker, and wrote several books which were received with great favor—a *Compend*, *Isagogæ* or introduction, and *Commentaries* upon Mondini, in which last work he corrects mistakes of that distinguished author, and gives minute descriptions of the various organs and textures of the human body.

PARACELSUS.

In point of genius, original research and intuitive sagacity, Paracelsus deservedly holds a superior rank. He was foremost among those whose labors introduced the new epoch in medicine, and his explorations were so extensive and profound that they have never been thoroughly apprehended. His father, Wilhelm Bombast, of Hohenheim, in Wurtemburg, was a physician of excellent scholarship, and instructed the young Philipp in philosophy and medicine as they were taught at the time. The youth was very precocious, and after a term of study with several distinguished churchmen, entered the university at Basel in 1509, in his nineteenth year. After this he became a pupil of the celebrated Tritheim, Bishop of Spanheim, who

taught him philosophy, alchemy and the properties of metals. He next spent a period in the laboratory of Sigismund Fugger in the Tyrol,* where he attained greater proficiency in chemistry and metallurgy. Then, following the example of Demokritos, Hippokrates and other ancient sages, he, at the age of twenty, made the tour of Europe, traveling on foot, visiting the various mines, and consulting with learned men and others in his quest for information. "I have pursued knowledge at the risk of my life," he said of himself; "and I have not been ashamed to learn of peddlers, news mongers and barbers."

Passing from Muscovy into the dominions of the Great Khan, he was made a prisoner and brought to that monarch, who promptly set him at liberty. He accompanied the son of that prince on an embassy to Constantinople, where, as Van Helmont informs us, he became the disciple of an "Arabian" physician, his own countryman, named Trismosinus or Pfeiffer, who imparted to him the knowledge denominated in alchemic diction, the "philosopher's stone."

Returning by way of the Danube to Italy and Germany, he served for some time as a surgeon in the imperial army. His reputation for skill and learning was now acknowledged by the scholars of the time. Among those who consulted him professionally was the celebrated Erasmus of Rotterdam. Going to Basel in 1526, he was appointed town physician, and shortly afterward, at the recommendation of the Reformer Œkolampadius, was chosen by the city council professor of philosophy and medicine in the university.

He now adopted the title of "*Utriusque Medicinæ Doctor*," or teacher of both branches of medicine, and

* The Fuggers were the principal bankers and money-lenders of Europe.

following a practice in vogue among scholars, he took the name by which he is best known, *Paracelsus*, as another Celsus. He was bold in his innovations. Rejecting the current Aristotelian philosophy and method, he accepted the Platonic doctrines. He added new observations to what was known of surgery. "The dead level of tradition is broken first by two men of originality and genius, Paracelsus and Paré," is the testimony of Dr. Charles Creighton. "Apart from the mystical form in which much of his teaching was cast, Paracelsus has great merits as a reformer of surgical practice. 'The high value of his surgical writings,' says Haser, 'has been recognized at all times, even by his opponents.' It is not, however, as an innovator in operative surgery, but rather as a direct observer of natural processes, that Paracelsus is distinguished. His description of 'hospital gangrene,' for example, is perfectly true to nature; his numerous observations on syphilis are also sound and sensible, and he was the first to point out the connection between cretinism of the offspring and the goitre of the parents."

Paracelsus was more famous, however, as an apostle of modern medicine. He would not be bound by the consensus of opinion entertained by the majority of the medical profession of the time, but unsparingly denounced it as an artificial system consisting of a gibberish unintelligible to the common people, a science which was only an invention to cheat and deceive, and an art, not of curing the sick but of worming into the favor of the rich, swindling the poor, and gaining admittance to the tables of men of high standing. "You live upon imposture," he declared, "and the aid and abetment of the legal

profession enable you to carry on your impositions and to evade punishment by the law."

He avowed the highest respect for the teachings of Hippokrates, but discarded the practice founded upon the writings of Galen, Razes, and Avicenna, burning them in the presence of his class. "Popular medicine," he declared, "knows next to nothing about any diseases that are not caused by mechanical means, and the science of curing internal diseases consists almost entirely in the removal of causes that have produced some mechanical obstruction in the body. But the number of diseases that originate from unknown causes is far greater than those that come from mechanical causes; and for such our physicians know no cure, because not knowing such causes, they cannot remove them. All that they can prudently do is to observe the patient and make their guesses about his condition; and the patient has good cause to rejoice if the medicines administered to him do him no serious harm and do not prevent his recovery.

"The best of our popular physicians are the ones who do the least harm. But, unfortunately, *some poison their patients with mercury*, and *others purge or bleed them to death.* There are some who have learned so much that their learning has driven out all their common sense, and *there are others who care a great deal more for their own profit than for the health of their patients.* A disease does not change to accommodate itself to the knowledge of the physician, but the physician should understand the causes of the disease. A physician should be the servant of Nature, and not her enemy; he should be able to guide and direct her in her struggle for life, and not throw, by his unreasonable interference, fresh obstacles in the way of recovery." (*Paragranum.*)

Such utterances speedily brought down upon him the bitter animosity of his colleagues. They soon became prolific in finding pretexts for attacking him. Paracelsus had departed from the general practice of giving his lectures in the Latin language, but employed the vernacular Swiss-German dialect, and they made this an ostensible reason for charging him with ignorance. He was a stranger, unknown to them, they declared, which was a mortal offense to a Swiss; he had been made a professor without their approval, and they did not know, they asserted, whether he had ever received any medical degree. Besides, he was profaning and vulgarizing the medical art by making its mysteries known to the laity, and was a man to be got out of the way at all hazards. The apothecaries joined in the cry. They were enraged because he as city physician had insisted upon ascertaining their fitness to compound medicines, and whether their drugs were pure and sold at prices not exorbitant. He had also offended them by writing his prescriptions in German instead of Latin, and because his formulas were simple and did not consist of from forty to sixty or more different ingredients. Indeed Paracelsus was a pioneer teacher of direct or specific medication.

The crowning act of enmity, however, was the ingratitude and treachery of the Canon of Lichtenfels. He had been given up to die by his physicians; but Paracelsus had succeeded in restoring him to health. He turned upon his benefactor, accusing him of sorcery, necromancy and drunkenness. The City Council of Basel, to its own disgrace, took sides with the ecclesiastic. Paracelsus indignantly denounced their action, and to escape prosecution for his temerity, left the city.

After a series of journeyings he came to Nuremberg. The physicians of this place, on learning of his arrival, published him as an impostor and charlatan. He replied by asking for patients suffering from incurable diseases. Several cases of elephantiasis were produced and successfully treated. Finally, in 1541, the Prince Palatine, Duke Ernst of Bavaria, invited him to make his home at Salzburg. The malignity of his enemies pursued him to this place of refuge, and he was treacherously murdered by assassins, September, 1541.

The works imputed to Paracelsus are numerous, and probably include treatises by others of his school. They seem to embrace every topic comprised at that time in the curriculum of medicine. From the earliest periods, not only drugs and surgical expedients, but prayer, religious offices, faith, philosophy, magic, astrology and pneumatology were included in the art of healing. We need not be surprised, therefore, that Paracelsus treated of them in his writings. Indeed, he entertained religious and theosophic opinions greatly resembling those of Jakob Bœhmen, and many of his utterances would furnish appropriate themes for the Society of Psychical Research.

Yet they who counted him a visionary, like those who call him an ignorant pretender, would reckon ill. "The highest merits of Paracelsus," says Giordano Bruno, "is that he was the first to treat medicine as a philosophy, and that he used magical remedies in cases where the physical substances were not sufficient."

Paracelsus believed medicine to be a holy art, and the practice a sacred calling which the unworthy and reverent can not understand. He described it with terminology partly current at the time, and partly

consisting of words of his own devising and selecting. "The knowledge of Nature is the foundation of the science of medicine," said he; "and it is taught by the four great departments of science: Philosophy, Astronomy, Alchemy and Physical Science." By philosophy he meant the true perception and understanding of cause and effect; and he adds, that "in this understanding rests the indication of the true remedy." "He must, above all, be in possession of that faculty which is called Intuition, and which cannot be acquired by blindly following the footsteps of another; he must be able to see his own way. If you wish to be a true physician you must be able to do your own thinking, and not merely employ the thoughts of others. What others teach you, may be good enough to help you in your search for knowledge, but you should be able to think for yourself and not cling to the coat-tail of any authority, no matter how high-sounding the title of the latter may be."

By astronomy is signified the mental sphere of the being. The influences of the seasons, hot and cold, dryness and moisture, light and darkness, are also included. "Man's diseases do not originate in himself, they originate from the influences which act upon him and enter his constitution. If the air becomes vitiated, it may poison man's body; if the astral influences are in a state of corruption, they may do likewise."

To be an alchemist is to "understand the Chemistry of Life. Medicine is not merely a science, but an art; it does not consist merely in compounding pills and plasters and drugs of all kinds; but it deals with the processes of life, which must be understood before they can be guided." "A powerful will may cure where a doubt will end in failure. The character of the phy-

sician may act more powerfully upon the patient than all the drugs employed." "The physical surroundings of the patient may have a great influence upon the course of his disease. If he is waited upon by persons who are in sympathy with him, it will be far better for him, than if his wife or attendants wish for his death." "The physician should be well versed in physical science. He should know the action of medicines and learn by his own experience and by the experience of others. He should know how to regulate the diet of the patient; the ordinary course of disease, and the premonitory symptoms; the innumerable remedies in nature, which are hidden from the eyes of the vulgar, but opened to the perception of the wise."

Paracelsus also insisted strenuously upon the natural qualifications of the physician. "He who can cure disease," he declares, "is a physician. To cure diseases is an art which can not be acquired by the mere reading of books, but which must be learned by experience. Neither emperors nor popes, neither colleges nor high schools can create physicians. They can confer privileges and cause a person who is not a physician to appear as if he were one, but they cannot cause him to be what he is not; they can give him permission to kill, but they can not enable him to cure the sick." "There are artificially-made physicians and there are born physicians. The latter possess their talent from birth, and it may be unfolded and grow like a tree if it is properly nursed. He who has no natural talent to be a physician will never succeed. He who is not a physician in the spring of his life, will not be one in the autumn."

"One of the most necessary requirements for a physician is perfect purity and singleness of purpose. He

should be free of ambition, vanity, envy, unchastity, pomposity and self-conceit, because these vices are the outcome of ignorance, and are incompatible with the light of divine wisdom which should illuminate the mind of the true physician."

Paracelsus was the first to make use of the term *magnetism* to express certain agencies and phenomena. He taught that the *archæus* or primordial life-essence was distributed in all parts of the healthy human body, and that it was of a magnetic nature, attracting or repelling other sympathetic or antipathetic forces belonging to the same plane. "The vital force is not enclosed in man, but radiates around him like a luminous sphere, and it may be made to act at a distance. In these semi-material rays the imagination of man may produce healthy or morbid effects. It may poison the essence of life and cause diseases, or it may purify it after it has been made impure, and restore the health." Again he says: "The invisible forces acting in the visible body are often very powerful, and may be guided by the imagination and be propelled by the will." He explains that this is accomplished through the principle, which he denominates *mumia*. This is the vehicle of life; "it is a spiritual substance containing the essence of life, and it can be brought again by art into contact with dying frames and revive them if the vital organs of the latter are not destroyed." The peculiar influence of one person upon another as well as its employment for beneficial and even baneful purposes are abundantly shown. Paracelsus was strongly in favor of employing the magnet itself for healing purposes, and gives explicit directions. He knew the powers of mineral, human and animal magnetism, and his doctrines in regard to human magnetism

have since been abundantly confirmed. Lessing, in 1769, proved that Paracelsus, and not Mesmer, was the original discoverer. He also mentions hydrogen as an element the existence of which was a recognized fact,* and it has been affirmed that he also knew of nitrogen and oxygen.

He taught that there were five causes of disease and five methods for treating diseases, each of which was sufficient for them all. There were accordingly five classes or sects of physicians. There were those who, like Galen and Avicenna, treat diseased conditions with appropriate remedies ; those who, like the Empiricists and Homœopathists, make use of specific remedies which have certain affinities for certain morbid conditions ; those who cure diseases by employing their will-power ; those who, like Hippokrates and the employers of magic, make use of spiritual forces ; and those who cure by faith alone. "Among these five classes the first is the most orthodox and narrow-minded, and they reject the other four because they are not able to understand them."

The doctrine of Signatures has often been mentioned with accompanying sneers. As Paracelsus explains it, its reasonableness is very plain. "This *signatum*, or specific indication, is a certain organic vital activity giving to each natural object a certain analogy to a certain condition produced by disease, and through which, in specific diseases, health may be restored in the diseased organisms." This hypothesis, it will readily be perceived, underlies the doctrine of Homœopathy and the dogma of direct and specific medication.

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* KEMSHEAD : *Inorganic Chemistry*, *p.* 66.

THE SCHOOL OF PARACELSUS.

The disciples of Paracelsus appear to have been numerous. His works were published and eagerly sought for, and the treatise on Surgery was regarded as a classic. His philosophic, theurgic and other writings, however acceptable to their readers, hardly came within the province of medical history, as it has come to be understood in later centuries.

Contemporary with Paracelsus was the celebrated scholar, Henry Cornelius von Nettesheim, more commonly known as Cornelius Agrippa. After graduating at the University of Cologne he was employed by the Emperor Maximilian in diplomatic service. He next served in the army, but soon abandoned active life for science, and engaged in the formation of a secret society of theosophists. He was invited to the University of Dolé, in Burgundy, in 1509, and lectured on the work of Reuchlin, *De Verbo Mirifico*, which gained for him the degree of Doctor of Divinity. Later he published a treatise on Occult Philosophy, in which he had the help of the abbot Tritheim. In 1511 he attended the Schismatic Council at Pisa as theologian, making for himself thereby bitter enemies in religious circles. In 1515 he delivered a course of lectures on the *Pœmander* of Hermes, and received the doctor's degree in law and medicine. Three years later he became the Syndic at Metz, where he was constantly in collision with the monks and the Inquisitor Savin, whose ill will was increased by his persistent defending of a woman accused of witchcraft. In 1522 he returned to Geneva and engaged in the practice of medicine, and the next year was appointed town physician of Friburg. In 1523 he was made court physician

to the queen-mother, Louise of Savoy, at Lyons. She demanded of him to make some astrological calculations, and upon his refusal dismissed him, withholding his compensation. He returned to the Netherlands, becoming historiographer to Charles V., and writing several works. Owing to the hatred of the Dominicans, he was kept in turmoil all his life and his memory vilified after death.

FAUST.

The story of Doctor Johann Faust has been so distorted, as to lead one to regard it as fictitious. He was, however, a real character, a native of the duchy of Weimar, and brought up at Wittemberg, where, at the university, he took the degrees, first of Doctor of Divinity, and afterward of Doctor in Medicine. He is mentioned by Gessner, Melanchthon, and others, and was well-known to Cornelius Agrippa and Paracelsus. Like the physicians of the time, he was versed in the Arabian learning, which afforded to his adversaries the opportunity to stigmatize him as a sorcerer and in league with evil demons. In this way, a man eminent in scholarship, a devoted and successful physician, was successfully calumniated, till our principal conceptions of him are formed from Marlowe's "*History*" and Goethe's immortal poem.

ANATOMY IN THE RENASCENCE.

Jacques Du Bois, who Latinized his name into Sylvius, was the first master of anatomic science in France. Finding that philosophy and literature afforded scant prospect of wealth, he entered the University of Mont-

pellier, about 1525, and obtained the medical degree. Returning to Paris, now fifty-one years old, he taught anatomy in the College of Trinquet, and afterward became professor of surgery in the Royal College. His chief improvement was the injection of the blood-vessels. He was characterized by great coarseness of manners, persistent adherence to Galen, and an intense jealousy of every one exhibiting talent for original research. He taught only from the carcasses of animals, and his great pupil, Vesalius, criticises him, but Sprengel defends him as a correct and able teacher.

About the same time flourished Charles Etienne, or Stephanus. He was a Huguenot in religion, and was accordingly excluded from official appointments, actually dying in prison, where he was confined on that account. He made various discoveries, among them the nutritious foramina of bones, various ligaments and muscles, the branches of the trifacial nerve, the valves of the veins, and the existence of the ganglionic or sympathetic nervous system as distinct from the pneumogastric nerve.

VESALIUS.

Andreas Vesalius, however, is credited with the introducing of the new era into the history of anatomy. He was born at Brussels in 1514, and after receiving an education at Louvain, he became a student of Du Bois in 1528. He soon perceived the insufficiency of the methods of instruction in France, and accordingly made his way to Venice, to prosecute his studies to better purpose. In 1536, he accepted an invitation to Padua, to demonstrate anatomy, and seven years later

he was invited likewise to Bologna and Pisa. He performed the duty of professor at the three universities during the same winter. In his teachings he made a new departure. Mondino and Berenger di Carpi had been circumscribed in their utterances and investigations by the acknowledged superior authority of Galen and the Arabian physicians of the Middle Ages. Vesalius had the courage, like Paracelsus, to set their claims aside, and undertake a new arrangement for anatomic instruction. He was twenty-five years old at the time, and in three years had perfected his plan, which, after some time, was adopted over Europe. Shortly afterward he was appointed court physician to Charles V., and continued in the same office with Philip II. Royal favor, however, was not powerful enough to exempt him from the enmities engendered by professional rivalry and popular prejudice. He was persecuted all through his official career, and entirely employed in attendance upon patients, and in defending his methods and innovations. His enemies finally conquered. He had been engaged in examining the body of a grandee, when the heart was observed to palpitate under the knife. He was immediately denounced to the Inquisition, and barely escaped its severest penalties, through the influence of the king, supplemented by a promise to make a pilgrimage to the Holy Land. While at Jerusalem, he accepted the invitation of the University of Padua to become again its professor of anatomy, to succeed his deceased friend, Fallopius. On his way, however, he was shipwrecked at Zanté, and died from privation in the fiftieth year of his age.

Vesalius is described by his biographers, not as a reformer as reformers are generally to be found, but

as making his innovations after the most approved methods of conservative scientism. He attempted no revolution of the methods in vogue, but only to rectify errors and add to the store of information then possessed by physicians. He had been carefully educated in the opinions of the time, and although professional jealousy and religious hostility embittered his life and hurried him to his death, he neither broke with the Church nor with the orthodox medical fraternity, but died as he had lived.

He was the author of the first anatomic plates executed after nature, and his writings accurately described the sphenoid bone, the divisions of the sternum and sacrum, the *vena azygos*, the *ductus venosus*, the omentum, the structure of the pylorus, the cæcal appendix, the mediastinum and pleura, and the anatomy of the brain.

His influence by no means ceased with his death. Anatomy was no longer hampered by tradition or religious prejudice. Instructed by his writings, and inspired by his example and the predominant spirit of the time, a multitude of inquirers an investigators arose throughout Christendom to carry on the work which he had begun.

EUSTACHI.

The credit awarded to Vesalius, however, ought in justice to be divided with his contemporary, Bartholomeo Eustachi. He was celebrated for his observations of the internal ear, the tube which bears his name, the anatomy of the teeth, and for his investigations of the intimate structure of organs. He employed lenses to assist him in his work. He had completed a

series of anatomic engravings in 1552, but was unable to publish them. The facts, however, were so important, that Lauth remarked, that, if he had succeeded in giving them to the world, anatomy would have attained in the sixteenth century all the perfection of two hundred years later. Eustachi fell under the displeasure of the authorities, and his works were placed in the Papal library, leaving others to make his discoveries anew.

COLUMBO AND FALLOPI.

Two of the pupils of Eustachi were Columbo and Gabriello Fallopi. The former was his successor at Padua, and afterward became a professor at Rome. He gave a more correct description of the heart and its vessels, the ventricles of the larynx, the pulmonic circulation, anatomy of the internal ear. Fallopi was a professor first at Pisa, and afterward at Padua. He rectified the knowledge then possessed of the anatomy of the ear, and corrected several mistakes of Vesalius. He directed attention also to the genitalia, discovering the canal which bears his name.

OTHER TEACHERS OF ANATOMY.

Aranzi, professor of anatomy at Bologna, has the credit of giving the first correct account of the anatomical peculiarities of the human fœtus. He also described the inferior cornu of the ventricles of the brain, giving them the name of *hippocampi*, and also explained the fourth ventricle as the *cistern* of the *cerebellum*. Varoli, the physician to the pontiff, Gregory XIII., gave a fuller description of the brain and its anatomy, than any of his predecessors.

No inferior place should be assigned to the able savant, Miguel Serveto, better known by his Latinized name of Servetus. He was the author of a treatise entitled *De Trinitatis Erroribus*—Errors of the Trinitarian Doctrine—published in 1531, in which, while expounding his philosophic notions, he set forth the imperviousness of the septum cordis, and the flow of the blood by what he terms an unknown route, by the pulmonary artery through the lungs and thence by the pulmonary vein to the left auricle and ventricle of the heart ; from which, he adds, it is conveyed by the aorta to all parts of the body. He was burned for heresy at Geneva, in 1553. Six years afterward Columbo forcibly and distinctly announced the circular course of the blood as a discovery of his own, and maintained that the pulmonary vein contained not air, but blood mixed with air, brought from the lungs to the left ventricle to be distributed through the body. From these two authors, William Harvey received his first conception of the circulation of the blood, to which he deservedly owes his fame.

The claim is made, with great plausibility, that Andrea Cesalpino, of Arezzo, in Tuscany, preceded him, having made this discovery in the year 1569. According to Dr. Giulio Ceradini, professor in Genoa, he "discovered the physiological and continued passage of the blood from the arteries to the veins across the capillary anastomosis in all parts of the body, and defined by circulation the perpetual motion of the blood from the veins to the right heart, from this to the lung, from the lung to the left heart, and from the left heart to the arteries ; producing in 1593 the experimental proof of this circulation, in the fact that the veins, when tied in any part of the body, swell between

their original capillaries and the ligature, and when cut, let out first the black venous blood, and then the red arterial blood." Harvey, however, makes no mention of this, although he names others in the same line of investigation. It is not the first time, however, that two men, not acting in concert and not even knowing each other, have made like discoveries. It seems to be a law of the mental universe, that when new knowledge is dawning upon the world, those who are sensitive and perceptive, are first to learn it, and may do so at the same time. Probably, therefore, as Dr. McDonald suggests, both Harvey and Cesalpino conceived the idea of the mechanism of the circulation of the blood independently of each other, though the verdict of history is in favor of Harvey.

FABRICIO.

Hieronymo Fabricio was a pupil of Fallopius. He merits distinction for his efforts to render anatomic knowledge more precise, and for his endeavors to illustrate obscure points by researches in comparative anatomy. In this way he investigated the formation of the fœtus, the structure of the œsophagus, stomach and bowels, and the peculiarities of the eye, ear and larynx. His great merit, however, consists in his demonstrations of the membranous folds in the interior of the veins, to which he gave the designation of *valves*. He was also distinguished for the introduction of the modern trephine, and for the employing of the tube in tracheotomy. His work on surgery passed through several editions, and affords an excellent summary of the condition of the art at that period.

The chief advances were made in two directions. The use of firearms had become general, requiring more specific attention accordingly for the peculiar class of injuries which they inflicted. The introduction and general prevalence of syphilis attracted general attention to the treatment of diseases of the urinary organs. Mayerne, of Venice, acquired a wide reputation by the use of bougies for stricture, having cured Henry III., of France, who had contracted it in that city when on his way home from Poland. Indeed, many of the later improvements in this department seem to have been suggested from the same cause.

AMBROISE PARÉ.

At that time surgical operations were of a rude character, cruel in the extreme, and often hardly less to be dreaded than death itself. The light that was dawning upon the learned world was little perceptible in this department. Ambroise Paré, who was first to introduce a new form of practice, was only a barber's apprentice and by no means a scholar or professional man. Nor did he consider that fact derogatory to himself or to his calling. Then, and till the time of John Hunter, surgical practitioners consisted generally of barbers, farriers, spayers of female swine, and even cobblers and tinkers. Dexterity, rather than educated skill, was held in highest esteem.

Paré excelled in tact and originality. He became a pupil at the Hotel Dieu, and when Francis I. invaded Piedmont in 1535 he accompanied the army. Here he ventured upon the innovation of bandaging gunshot wounds instead of applying hot oil. His success

encouraged him to perseverance, and he printed a treatise on the subject at Paris in 1545. The same year he became prorator for the celebrated Du Bois (Silvius), and in 1550 he published a second work upon anatomy. He made bolder innovations. He was the first to apply the suture for hare-lip, taking his cue from the practice of tailors and women in winding their thread around their needles. His greatest improvement consisted in the introduction of the ligature for large arteries, and so rendering amputation on a broader scale possible for the first time in history. This innovation, however, was fiercely opposed, and its inventor was bitterly denounced by the medical men of the time. They not only resorted to the base expedient of decrying his professional knowledge, but they also ridiculed the idea of hanging a man's life upon a single thread, when boiling pitch had stood the test so long. It was of no avail for Paré to defend the use of the ligature by a demonstration of its success. He resorted to spurious quotations from Galen and others to show that it was no innovation, but that it had been known and approved by them. It was left for a later generation to adopt his practice. The children of the men who persecute and murder prophets not unfrequently disclaim the act and build monuments to the martyrs.

By the French army, however, Paré was beloved almost to actual worship. He accompanied the campaigns from 1535 till the battle of Moncontour in 1569, and on one occasion the discovery of his presence in a besieged garrison so inspired the troops that they rallied and attacked the enemy with renewed courage, putting them to rout. He was equally a favorite with the kings of France, and was in succession the surgeon

to Henry II., Francis II., Charles IX., and Henry III. On the night of the massacre of St. Bartholomew, Paré, who was a Huguenot, actually owed his life to the personal exertions of the king himself.

Notwithstanding the endeavors to discredit him with the profession, Paré found men of eminence who were willing to adopt his improved methods. Among these were Maggi Leone, then a professor at Pavia, Botal, the phlebotomist, then physician to Henry II. and Charles IX., Guillaumeau and others of high distinction.

Paré had evidently been an offender, because, like Paracelsus, he used the language of the people in his books, and so made unprofessional readers familiar with his methods and sentiments. He was a Frenchman, and employed none of the recondite, allegoric and metaphysical utterances characteristic of the Swiss author. In the present period when everything transcending a bald materialism is a subject for contempt, and is carefully ignored in surgical teachings, this fact may tend directly to commend him to favor.

GENERAL CONDITION OF THE SURGICAL ART.

Antoine Chaumette, an eminent surgeon, was the author of an able treatise relating chiefly to syphilis and associated complaints, and also to gunshot wounds. William Clowes, who accompanied the army of the Earl of Leicester to the Netherlands, also published a work upon army surgery, based upon his observations and experiences. He also issued a small book upon the *Morbus Gallicus*, and a few years later he prepared "*A Right Faithfull and Profitable Treatise upon the King's Evil.*"

"Surgery in the sixteenth century," says Dr. Charles Creighton, "recovered much of the dexterity and resource that had distinguished it in the last days of antiquity, while it underwent the developments opened up to it by new weapons of warfare. The use of the staff and other instruments of the 'apparatus major, was the chief improvement in lithotomy. A 'radical cure' of hernia by sutures superseded the old application of the actual cautery. The earlier modes of treating stricture of the urethra were tried; plastic operations were once more done with something like the skill of Brahmanical and classical times; and ophthalmic surgery was to some extent rescued from the hands of ignorant pretenders."

"It is noteworthy," he continues, "that even in the legitimate profession, dexterous surgical appliances were kept secret; thus the use of the 'apparatus major' in lithotomy was handed down as a secret in the family of Laurence Colot, a cotemporary of Paré."

INNOVATIONS IN MEDICINE AND SCIENCE.

The actual improvements in medical practice in this century were far less than might have been expected. The failure of the Galenic remedies to cure the prevalent disease of the century, led, as has been observed, to the employment of new remedies, so that mercury and antimony became familiar to practitioners. They were bitterly opposed, however, both by the Faculté de Medecine at Paris, and by the College of Physicians and the Society of Apothecaries in London. Arnold of Villenova and Raymond Lulli were recognized as leaders of the so-called chemical or chemiatric school.

Clinical instruction in hospitals was introduced in the university of Padua by Giovanni de Monte, who lectured on the patients at the hospital of St. Francis. This has been a prominent feature of instruction in Europe ever since.

In opinion, however, there had been a less decided cutting loose from the past, but rather a steady growing as from infancy to adolescence, and a greater readiness to carry new convictions to the foreground. Enterprise was bolder in its ventures; religious faith now dared show itself in open day in resolve to free the individual conscience from the domination of hoary, but usurped, authority.

The very earth had been rudely torn from its foundations, and thrust forth in its truer character as a globe revolving in the infinite space. Copernicus (Kopernik) had dared more, and proclaimed it but a single planet in the family of the solar universe. Pythagoras and Egyptian temple-sages had taught this as a sacred mystery which profane ears might not hear of; the Khalif Al Mamun had been denounced for it by Moslem imáns as an atheist attempting to remove the sites of heaven and hell; and now, a century after the fall of Constantinople, the work of the Prussian monk was condemned by the Inquisition, prohibited by the Congregation of the Index, and stigmatized alike by Martin Luther and his former Roman Overlord as false Pythagorean doctrine, destructive to religion and subversive of the Holy Scripture. To dethrone the earth from the central dominating position, giving her many equals and not a few superiors, seemed indeed like a terrible conception. It took away apparently all claim almost upon the divine regard, because such claim could not

be exclusive, and with this came the mental fear of the overthrow of the entire theologic structure. The ancient usage and privilege engaged in a mortal struggle to restrain the advancing movement of scientific explanations, but only to be worsted in the encounter. Thus it has always been, and thus it will always continue to be.

A few years after the death of Copernicus, there was born the man to defend the new doctrines, and first to die for having promulgated them. Giordano Bruno was likewise a monk, and as such was amenable to the spiritual authorities. He early learned to doubt the cardinal points of belief, and from careful observation of phenomena in the sky, became a firm receiver of the Copernican doctrines. In a work on the plurality of worlds, he ventured to declare that the common notion was untrue: the earth was not a flat surface supported by pillars and foundations; nor was the sky a firmament or the floor of the angelic heavens.

Bruno was likewise a philosopher, and averred his belief in the Supreme Mind, an Intellect of which the visible world is only an emanation and manifestation originated and sustained by force derived from it; and that if this creative and sustaining force should be withdrawn, all things would at once disappear from existence.

He was followed from place to place by spies and emissaries of the Inquisition, making his residence in turn in Switzerland, France, England and Germany. Finally he was persuaded by a treacherous Venetian nobleman to accept a position in his household, accused by him, and betrayed to the familiars of the Holy Office. In those days, when the ecclesiastic authority was often dominant over the civil government, there

could be no sequence except of a cruel kind. Bruno was surrendered by Venice to the officials of the Inquisition at Rome, where he was imprisoned two years, subjected to their peculiar treatment, accused of teaching doctrines subversive of the Catholic faith, and finally burned at the stake, February 16, 1600. His monument commemorates the occurrence.

This tragedy closes our review of the sixteenth century.

CHAPTER V.

MEDICINE IN THE SEVENTEENTH CENTURY.

The Renascence was now accomplished. New thought was at work opening the way for new methods of action, and new conceptions of philosophic and scientific truth. The seventeenth century was thus characterized by an advance well defined in the fields of inquiry as well as adventure.

The re-discovery of the American continent had itself been productive of great changes in the social and political condition of Europe. To be sure, Spain, claiming the entire region by virtue of a pontifical grant, had strenuously resisted every attempt of colonists of other countries to plant settlements in the new territory. Adventurous seamen, nevertheless, traversed the ocean, exploring the seas and shores of the New World, and even committing acts of piracy. The destruction of the Invincible Armada effectually terminated the Spanish supremacy, leaving only the power to snarl and execrate, with bated breath, the emigrants from the several regions of Europe who ventured to find new homes beyond the Atlantic in the territory which Spain had claimed as exclusively her own. Religious dissent, which neither Romanist nor Reforming rulers or divines were willing to permit, now led thousands to seek in the New World that

freedom and exemption from cruel persecutions which they could not enjoy in the Old.

SCIENTIFIC ADVANCEMENT.

Both Romanist and Lutheran were for a time as one in hostility to the scientific inquiry of the age. All the same, however, the schools of Europe were agitated by the new discoveries and the theories which these demonstrated. It was not so much skepticism and doubt that were dominant, but a deeper spirituality and a tendency to the esoteric beliefs of the old philosophers, which characterized the teachers of the new learning. Hence it was denounced alike by the clergy of every creed, as atheism, sorcery, and communion with the evil powers. The accusations for witchcraft became numerous in every country. It was easier to burn innocent folk alive on such a charge than to meet them by open argument.

While Bruno was languishing in the dungeons of the Inquisition, Johann Keppler was preparing to take the torch which had been forcibly wrested from his hands. Keppler was a native of Wurtemberg and had been a student of theology. He had, however, accepted the mystic religious belief then current among deep-thinking men, as well as the proscribed theory of the Copernican system. Leaving the university of Tubingen in 1594, he became a professor in the university at Gratz, where he prepared his first treatise. Six years later he was invited to Prague by Tycho Brahe, whom he afterward succeeded as Astronomer Royal to the Emperor Rudolph II. His genius now seemed to have risen like the fabled Phœnix from the ashes of Giordano Bruno, and similar persecutions followed

him. He was attacked by Romanist and Lutheran with equal animosity, accused of atheism and hounded from city to city. Even his mother was prosecuted as a witch, and he spent five years to defend her. The Emperor, always poor, was unable to pay him his salary, and he left Prague to become again a professor in a university, and afterward astrologer to the celebrated Wallenstein.

Keppler was of a philosophic disposition as well as enthusiast. The modern notions of induction enable us to learn but little, and that with no certain assurance; and the scientists, accordingly, who work upon that line, allow the understanding and logic-faculty to usurp the office of the rational and creative powers, and shut themselves out of three-fourths of their minds. No great discovery ever was made, La Place truly declares, without a great guess. Keppler, with the genius of a Plato and a Swedenborg, and as by prophetic insight, became cognizant of the laws and processes which are active in the universe. He comprehended the subtile secret key to nature, the fact that man and the universe are built after one pattern, and have the same origin. Sweeping away the chaos of cycle and epicycle in the sky, by which the former notions of learned men had been pervaded, he evoked in its place the celestial order and harmony, and showed conclusively that numerical and geometric relations connect the distances, times and revolutions of the planetary earths.

Keppler died poor, and his books were placed on the *Index of Prohibited Reading;* nevertheless he fully realized his exultant assertion: "I have stolen the golden vases of the Egyptians to build up a tabernacle for my God far away from the confines of Egypt."

GALILEO.

The invention of printing had made the general diffusion of learning possible and certain. Its benefits were supplemented by the discovery of the telescope. Ancient savants in Assyria and Babylon had employed lenses to aid them in the forming, and afterward in the deciphering of their minute wedge-shaped characters. Doubtless, likewise, Chaldæan astronomers had taken advantage of the same device to explore the constellations of the sky, and to ascertain the approach of hostile armies; but the invention was no longer known. Even Francis Bacon was declaring his disbelief in the utility of optical instruments in scientific inquiry, when in 1609 Galileo Galilei of Florence, constructing a telescope, directed it toward the sky, and speedily became able to demonstrate the truth of the Copernican system, which Bacon had rejected with a sneer of contempt. He showed conclusively that the sun was the centre of the cosmic universe and the earth but a single member of the planetary group; and also, that other planets had moons revolving round them. Aristotle was proved to be in fault; Copernicus had maintained the truth.

The persecution which had consigned Bruno to the stake, and embittered the life of Keppler, was now employed to silence the utterances of Galileo. First came the trite charges of atheism and blasphemy; then a prohibition to announce his discoveries; afterward the dungeon of the Inquisition, the peril of the torture-chamber, and, finally, after his death, the denial of interment in consecrated ground.

Copernicus, a century before, had been more wary. Knowing that a similar fate would be visited upon

him he delayed the publication of his astronomic doctrines till the very last hours of his life.

Mrs. Partington, with her broom, failed to drive back the tides of the ocean. The proscription of Copernicus and his doctrines, the martyrdom of Bruno, the persecution of Keppler and his mother, the tortures of Galileo and refusing of a grave, were not sufficient to arrest the great waves of light which were deluging the religious and scientific world. The telescope was mightier than proscription enforced by the rack and fagot. Before half a century had passed from the immolation of the noble martyr at Rome, it became impossible to find an astronomer in all Europe who did not accept the doctrines that the sun was the centre of the planetary universe, and that the earth turned every day upon its axis and made a revolution every year around the sun.

The stone which the builders rejected, had now become the head of the corner ; and the one described by the prophet as cut from the mountain and hurled without hands to smite the image of Serapis on its feet, was now becoming a mountain to fill the whole world.

VAN HELMONT.

The same movement and inspiration that had caused science to make a new departure were also operative in medicine. The peculiar mystic and theosophic genius which distinguished Bruno and Keppler, was also characteristic of Jan Baptista Van Helmont. He was a native of Brussels, and of baronial rank, holding the titles of lord in several fiefs. He was educated at Louvain, and began the study of natural science in

the Jesuit school. Repelled, however, by their hard and dry philosophy, he turned with avidity to the mystic writings of à Kempis and Tauler. Adopting the peculiar life there set forth, he made over his possessions to his sister, and withdrew entirely from high society. He now entered upon the study of medicine, graduating in 1599. He read carefully what had been inculcated by the accepted authorities, but was greatly dissatisfied both with the methods and the results. He next took up the writings of Paracelsus, and gave them his hearty approval. Having received his degree, he followed the example of his master and of the ancient philosophic physicians, journeying through France, Italy, Switzerland and England. He finally married a lady of wealth and engaged in practice, gratuitously treating the poor, and dying in 1644.

Van Helmont was a diligent student and investigator, eager to ascertain the causes of all the phenomena of life. Hence his strong attraction for the doctrines of Paracelsus He was the author of several works—*Ortus Medicinæ*, or the Origin of the Medical Art, *Theory of Paradoxes*, *Cure of Wounds*, *Tartar in Wine* *God in Man.* They are replete with the theosophy and mysticism which characterized much of the literature of the period, while at the same time they abounded with other learning of acknowledged worth. He was a Platonist, and believed that essential and original knowledge had been imparted to every one, which was perceived when external influences were in abeyance. He inculcated, accordingly as the Great Secret, that there was an energy in every one capable of working upon other objects through the suggestion and power of the imagination, and of so impressing itself upon

others as to continue thus operating. By virtue of this energy and force man ruled over physical nature.

He was, therefore, of course, a firm believer in animal magnetism, as well as in the power of the human will and imagination in the exercise of the art of healing. He regarded the common medical knowledge as insufficient for its purpose, and as far removed from the real power which God has conferred for healing. His own presence, he declared, was often sufficient to cure the sick without other remedies. He operated through his own will, he affirmed, not only upon individuals, but also to impart a healing virtue to medicines. In his own case he relied more upon this agency than upon physical means. He declared that many herbs acquire an extraordinary power from the imagination of the individuals gathering or manipulating them. Nevertheless he regarded the art of medicine as magnetic and supra-natural, rather than as the simple employing of drugs.

He also inculcated that "the sun-tissue in the region of the stomach is the chief seat and essential organ of the soul," the genuine seat of feeling and emotion, as the head is of comparison and memory. From that point the light and warmth proceed and diffuse themselves over the body, and also the life which prevails in the organism. The will, however (the *blas humanum*), is the first of all powers, and the fundamental cause of all activity.

As a chemist, many writers consider Van Helmont as the greatest one living before Lavoisier. He was the first to give the name of *gas* to aëriform bodies and he observed that the application of heat would disengage gases as well as the dissolving of the various carbonates and metals in acids. But for him, says

Deleuze, it is probable that steel would have given no new impulse to science. While, therefore, in these materialistic times it is common to pass over his theosophic and psychologic doctrines in silence, if not with contempt, his contributions to chemistry compel respect; and the propounders of later systems are finding their discoveries in the departments of tabooed knowledge already set forth in his works. In regard to medication, he only employed mild treatment and that with admirable success. Much of his practice however, as has been remarked, was gratuitous.

THE ROSICRUCIANS.

About the year 1610 appeared a little book in Germany, entitled *The Discovery of the Brotherhood of the Rosy Cross.* It announced the existence of a secret fraternity of philosophic and benevolent individuals, whom it described as having been instituted as a *Temple* by Christian Rosenkreutz, and to be proclaimed to the world in 1608, a hundred-and-twenty years after his death. This book created an immense excitement; it was still a time when the stake and scaffold were in fashion, and while some invoked fire from heaven upon the unknown benefactors, others recommended the punishment of the wheel.

The avowed object of the fraternity was to ameliorate human suffering, to advance knowledge and enlightenment, and to promote charity among human beings. Whether there was any actual organized society has been disputed. If it did exist it kept itself like the ancient Gnostics, aloof from being known. This much is certain, that the red cross which designated them was the badge of the Knights

of the Temple ; and there was a conventional language extant among the thinking men of Europe, called the *Lingua Magica* and the *Lingua Angelorum*, which they understood and the uninitiated sciolists were never able to comprehend. To this blundering we are indebted for much that is affirmed about the scientific men and others of the Middle Ages. They had successfully obeyed the maxim : "Learn to know all, but keep unknown."

The Rosicrucians, it was declared by writers, were especially distinguished by their knowledge of the medical art. They did not employ charms and devices to captivate the fancy, but made use of simple remedies with extraordinary success. In this may be perceived their resemblance to the methods of Van Helmont.

Robert Fludd, of Oxford, in England, was regarded as among the most illustrious of the fraternity. He was a physician of superior attainments, and passionately fond of study. He was the author of several works, now preserved as curious. In his writings he emphatically disdains the notion that men can not be philosophers, except they put their knowledge to some ordinary worldly use.

Thomas Vaughan, also an Oxonian, seems to have been regarded as a Master in the Brotherhood. He also was a physician, and wrote much, using the pseudonyms of Cosmopolita and Eugenius Philalethes. Vaughan wrote particularly about the elixir of life, and many seem to have believed that like another Mejnour, he survived into the later centuries.

The doctrine was taught that an aura, magnetic virtue, etherial spirit or fire exists in all natural substances, making them more or less sensitive and

animate, according as they were freed from material obstruction. Thus, all minerals, by virtue of this principle, have the rudimentary possibility of becoming plants and growing organisms; thus all plants have rudimentary sensitives which may, in the course of ages, enable them to perfect and transmute into new creatures, lesser or higher in their grade, nobler or meaner in their functions. In regard to gold, it was affirmed that it was constituted from sunbeams and light suffused into a material matrix, and that it had a strong tendency to transfuse other materials into itself.

It will be borne in mind that Basil Valentine, as well as other alchemists, wrote in this style; and whether the language should be interpreted literally or metaphorically, or in both senses, the intelligent reader may judge. Whether Van Helmont, Keppler, Paracelsus, Jakob Bœhmen and others of that time, who may be supposed to have entertained like sentiments, were Rosicrucians is also to be answered as we best are able. Certainly many notions now current in learned circles had been then anticipated. A physician, professing to be a member of the mystic brotherhood, bearing the name of *Chaos*, came to Vienna, where he acquired a fortune. The Emperor, Ferdinand III., admitted him to the nobility, and he afterward devoted his property to the founding of an orphan asylum.

SYMPATHETIC POWDER.

Nostrums represented as having been prepared by Rosicrucians, were offered in profusion to the public, and much imposture and charlatanry became current under that name.

About this time Sir Kenelm Digby, of Montpellier, gained fame by a remedy known as "Sympathetic Powder." It was not applied to the wounded or affected part, but to weapons inflicting the hurt, which were sprinkled with it and dressed with salve several times a day. Meanwhile the wound itself was washed, bound up closely and left with no further attention. It is hardly necessary to explain why wounds under this treatment generally healed more readily than under the too common practice of frequent disturbing of the sore.

HARVEY AND HIS DISCOVERY.

Despite the work of Keppler and Galileo, and the other grand achievements of this period, the discovery of the circulation of the blood must be enumerated among the most important. It effected a revolution not simply in the current views of physiology and pathology, but in every scientific theory which was allied to them. Although it did not exalt medicine to the rank of an "exact science," it was an active factor in sweeping from it an immense number of illusive notions.

William Harvey had been a student at Padua in the last years of the sixteenth century. He learned from his preceptor, the celebrated anatomist, Fabricio, of the existence of valves in the veins, and himself tested the matter by experimental inquiry. He had also become familiar with the exploration of the lesser circulation, as given by Servetus and Colombo. Combining these facts together, he prosecuted the subject till he had fully demonstrated the existence of the general circulation from the left side of the heart by

the aörta and its subdivisions to the right side of the heart by the veins.

Meanwhile he returned to England, in 1602, and became physician to James I., continuing in that function under Charles I. He also received the appointment of professor in the College of Physicians in London 1615, where, in 1619, having perfected his demonstrations, he made known his discovery of the general mechanism of the circulation. The storm which he encountered was fierce and threatening. Medical men are generally conservative and constitutionally averse to innovations which cast their notions and methods into the shade. Hume, the historian, remarked accordingly, the significant fact that no physician in Europe who had reached forty years of age ever to the end of his life adopted Harvey's doctrine of the circulation of the blood. It ran the gantlet of the schools, was severely attacked on every side, and the promulgator himself personally denounced for obtruding it upon the public attention. When a scientific fact cannot be successfully met, dishonest adversaries usually vent their spite upon the person who brought it to view. Then the pretense is made that the discovery or invention is of no value, involving it and its discoverer in a common odium. This failing, the next expedient is to assert that it really is not new, that some one of their own number has discovered it, or at least introduced it, so that the merit is claimed as all their own.

Such is the course followed in our later times, especially in the medical world; such was literally the experience of William Harvey. After he left Padua the great theme of discussion was in respect to "*the Harvey Paradox*." The Faculty of Medicine in

Paris led off in the attack. Leichner, in 1646, entitled an essay of his own : "*De Motu Sanguinis, Exercitatio Anti-Harveiana*," Concerning the Motion of the Blood, a Discourse against Harvey. Even Zacharia Silvius, in 1648, in a preface to Harvey's *Exercitatio Anatomica* denominated the theory, a new and unheard-of opinion respecting the motion of the heart and circulation of the blood.

The demonstrations, however, proved too much for the opposition. Jean Riolan, of Paris, who seems to have always been on the alert to cast unworthy imputations upon doctrines not emanating from approved sources, was the most violent adversary of the new theory. He was compelled, in this controversy, to meet the evidences which Harvey had adduced, by others of equal force and plausibility. This was impossible, and finally, yielding the argument he embraced the new doctrine and became its most zealous apostle.

Italian writers, however, were not willing to concede the merit of original discovery. The leading medical authorities of Europe having accepted the theory of the circulation of the blood, they promptly hastened to the next resort common in such cases, and denied the claim of its novelty. They boldly declared that the same discovery had already been made in Italy the previous century, by Andrea Cesalpino, a Tuscan savant of distinction.* This was in 1593, five years before Harvey, then but twenty years old, had become a student at the University of Padua. They accordingly accused him of having falsely claimed for himself in his book published in 1628, the credit of first bringing to light this moment-

* See page 184.

ous truth, and only award to him the doubtful merit of "carrying on successfully a conflict against ignorance and prejudice by divulging this great discovery which Cesalpino had made."

The general consensus of opinion now concedes the honor to Harvey. Our attention is directed accordingly to the results of the great discovery. It placed physiological knowledge upon new foundations, and opened the way for explorations in new directions.

MICROSCOPIC ANATOMY.

The doctrine of the circular motion of the blood was finally adopted as affording the most satisfactory explanation of many facts in regard to the structure of the body which had not been before understood. Immediately research took a fresh impetus, and the literature of the profession was enriched by valuable contributions from prominent investigators. Malpighi, of Bologna, afterward physician to Innocent XII., was among the first to employ the microscope in his investigations. This brought down upon him the disapproval of his associates, who declared that the study of microscopic anatomy was adverse to the true interests of medical practice. Malpighi practiced vivisection, opening the bodies of living animals, and he made many of his most striking discoveries in this way. He demonstrated the course of the corpuscles of the blood in the minute vessels, thus corroborating the fact of the communication between the veins and the arteries. Harvey had proposed the theory of capillary circulation, and four years after his death, Malpighi demonstrated its truth. The latter also discovered the plan of structure of the secreting glands,

the vesicular structure of the lungs, the lower structure of the epidermis, the cortex of the kidneys, and the follicular bodies of the spleen to which his name has been affixed. He was the first to investigate the gray matter of the brain, which he considered as glandular in structure, and that its function was to secrete the "animal spirits." This opinion was also entertained by Leeuwenhoek, from whom it was afterward quoted by Emanuel Swedenborg.

Discoveries in anatomy by means of the microscope became numerous. Gaspardo Asellio in 1627 demonstrated the existence of the chyliferous vessels; Mentel, following Eustachio, observed the thoracic duct: Wesling of Vienna, in 1634, gave the first delineation of the lacteal vessels; Highmore distinguished between them and the mesenteric veins; Wirsung and Pecquet, in 1647, discovered the common trunk of the lacteals and lymphatics; and Jolyffe of England, simultaneously with Olaf Rudbeck of Sweden, ascertained the distinction between the lacteals and lymphatics and the termination of the latter. Thomas Wharton was first to give a general description of the glands, and Glisson distinguished himself by a minute description of the liver, with an account of the stomach and intestines.

Later in the century Meibomius published a treatise on the anatomy of the eyelids; and Peyer, in 1677, discovered the agminated glands which bear his name.

The innovation of employing men instead of women in obstetric practice was introduced by Julien Clement in 1676. It is said, however, that the practitioners did little more than copy the work of Eucharius Rhodion, entitled *The Byrthe of Mankynde*, first published in 1540.

Hugh Chamberlain distinguished himself by the invention of the obstetric forceps in 1672, keeping the secret for his own profit.

Drelincourt, of a Huguenot refugee family in Holland, endeavored to set forth the changes induced in the uterus by impregnation, and also to elucidate the development of the fœtus. Régnier De Graaf made an investigation of the pancreas, and also of the structure of the sexual organism, recording many important observations; but, unfortunately, his labors were cut short prematurely by death at the age of thirty-two.

NEUROLOGY.

Duverney, of the Royal Academy of Sciences at Paris, distinguished himself by giving the first accurate account of the organism of hearing. He appears to have been the first who demonstrated the fact that the cerebral sinuses were the nervous receptacles of the brain, receiving the veins of that structure, and emptying into the jugular veins. He was very accurate in his explanations of the ganglia, the medulla oblongata and its pyramids, the formation and distribution of the intercostal nerve, the spinal cord, and the process of ossification.

Raymond Vieussens, also, in his great work on neurography, in 1684, made important additions to what was then known. He gave new light in regard to the configuration and structure of the brain, spinal cord and nerves; and presented the views in regard to the sympathetic nerve and ganglionic system, with the formation and connections, which were generally adopted by anatomists.

WILLIS.

The most distinguished writer upon anatomy in the seventeenth century was Thomas Willis. He was one who felt able to afford to give due credit to those who aided him; and he accordingly acknowledged his obligations to Wren and Millington, and in a more marked degree to Richard Lower. His candor was as meritorious as his contributions to science. His anatomy of the brain and nerves was minute and elaborate above all who preceded him. He made the arrangement of cranial nerves now in common use, and described the various structures of the encephalon, the striate bodies, the optic thalami, the four orbicular eminences, the peculiar appearance of the cerebellum, and in particular the remarkable anastomosis of the vertebral and carotid arteries forming the "Circle of Willis." To him particularly, as well as other writers of celebrity at that period, the world is indebted for aid to comprehend the physiology as well as structure of the nervous system.

SURGEONS.

The advance in surgery is less noted by writers. Professional pique, doubtless, was a principal reason; the art being still associated with the calling of the barber and other crafts characterized by skill with mechanics' instruments. The increase of anatomic knowledge, however, compelled more diligent attention to the modes of operating; and naturally as well as necessarily, this tended to exalt the surgeon's vocation. Thus in France, it was usual for the demonstration in anatomy and surgery to be given by a physician; but in 1671, the king decreed that the

lectures should be delivered by a surgeon. In Germany, likewise, were surgical authors and practitioners of note; among whom were most eminent, Fabriz von Hilden, the introducer of the tourniquet; Schneider, Heister, and Rau of Leiden. The latter was distinguished as "the most successful lithotomist that ever lived." He, however, refused, even to his own pupils, to divulge his method of operating. The operation by the lateral method came to great perfection in the hands of Jaques Beaulieu. The experiment of crushing the stone in the bladder was likewise attended with success.

Transfusion of blood was also performed, and several members of the Royal Society, such as Boyle and Lower, took much interest in it. The success, though somewhat encouraging, was not so much so as to justify persistence in the practice.

Richard Wiseman is called the "Father of English Surgery," and the "Paré of England." He was surgeon to James I. and Charles I., taking the part of the Royalists in the Civil Wars, and accompanying Prince Charles in his exile. After the Restoration he held the office of Sergeant-Surgeon to Charles II. and James II. He was the first to advocate amputation before the setting in of fever, in cases of gunshot wounds and other injuries of the limbs. He introduced the practice of treating aneurism by compression, and improved the method of procedure for hernia. His work, *Seven Chirurgical Treatises*, first appeared in 1676; and related to tumors, ulcers, anal diseases, scrofula, wounds, fractures, luxations, and syphilis. Several editions were published.

Trephining was freely employed; Philip William, Prince of Orange, is said to have undergone the opera-

tion seventeen times. Other operations, which had been anciently common, seem to have been again called into use. Flap-amputation, which the Roman surgeons practiced, was again introduced by Lowdham, of Oxford, in 1679. Another author, however, gives the credit to James Young of Plymouth, who also advised limited compression of the main artery while operating. In short, it appears, the principal endeavor, at this time, was to perfect the surgical art as it was already known, and make good use of the skill already in hand, rather than to launch out into new fields.

LATER SCHOOLS OF MEDICINE.

The new theory of the circulation of the blood, and other causes, did not, at first, produce apparent results upon the current practice of medicine. Indeed, there has been a tendency to accommodate theories to the methods and remedies in vogue, rather than to modify the methods to meet the new light and conditions. The ancient dogmas were not eliminated, but attempts were made to reconstruct medicine upon a physiological basis. Several schools thus came into existence, which continued till another century.

Borelli, of Naples, was teacher of mechanics and anatomy at Pisa. He was a zealous believer in the mathematical and mechanical doctrines taught by Keppler and applied to the laws of motion, and he entertained the conviction that the motions of animals were thus controlled Bellini was a student at Pisa, and adopted these opinions. The human body, they taught, was a collection of tubes forming an hydraulic medicine ; and they actually estimated the force of the

circulation of the blood and other fluids through the vessels. They did not, however, regard the propelling force as solely mechanical, but rather as proceeding from the fermentation of the blood, which thus disengaged the vital spirits, and by their agency forced the blood through the body. The sole object of respiration, Bellini held, was to push the blood through the capillary vessels with an adequate amount of force. The movement of the bones and muscles was explained by the theory of the lever; digestion was considered as essentially a process of trituration; and nutrition and secretion were set forth as dependent upon the tension of the vessels. Fevers were also explained by the hypothesis of mechanical action. Nevertheless, the theories of disease led to no radical or important change in therapeutics.

These doctrines were favorably received in all the universities of Europe. In Italy, Germany, and England they were accepted by the leading practitioners. Steno, Lower, Baglivi, and Cole of England were among the champions, and Pitcairn, for many years professor at Leiden, was one of the most distinguished exponents of the system. Even Boerhaave adopted the theories respecting secretion and inflammation.

GERMAN ECLECTICS.

About this period there appeared a school of medicine in Germany, known by the title of "Eclectic Conciliators." Conspicuous among them was Daniel Sennert, a professor of the University of Wittemberg. It was an attempt to harmonize the conflicting doctrines, by a system embodying the principal teachings of Hippokrates and his successors, the psychic and

magnetic views of Paracelsus, and the "new learning" of the age. The century was what is now denominated credulous, and we need not be surprised, therefore, to learn that these Eclectics believed in witchcraft, actual communion with diabolic powers, the alchemic theory of transmutation, and the doctrines promulgated by Van Helmont and his distinguished son.

THE CHEMIATRIC SCHOOL.

Francis de la Boë succeeded the younger Van Helmont, as an exponent of the "chemical" school. He was the son of a French Huguenot sojourning in Holland, and for fourteen years held the position of professor of medicine at Leiden. He was a man of superior learning, and on intimate terms with Leibnitz and other eminent scholars. While accepting many of the doctrines of Van Helmont and Paracelsus, he took, in many respects, an independent position, more in consonance with the new views of pathology and chemistry.

The "humoral pathology" was the orthodox theory. It was held that disease was produced by the abnormal condition of the fluids of the body, and also that medicine acted through their agency. The "chemical school" discarded this notion, substituting in its place the theory of chemical disturbances. The principle which characterized this school was not, as many have unwittingly imagined, the employing of chemical, and especially mineral medicines, in opposition to the current "Galenic remedies." The great stress, instead, was laid upon pathology, the causation of disease. De la Boë endeavored to construct the whole theory of medicine over upon the new views of chemistry and

the doctrine of the circulation of the blood. He made account, therefore, of anatomic as well as chemical changes. In his conception, fermentation played an important part in the vital processes; and "acridities," or chemical disturbances of these processes were the cause of fever and other diseases. Sometimes the disturbing agencies that predominated in the fluids and secretions of the body were acid and sometimes alkaline. Nervous diseases were supposed to be induced by disturbances of the "vital spirits." Accordingly, the remedies employed by this school were sometimes chemical and sometimes Galenic. De la Boë was far more moderate in the practice of blood-letting than physicians of later schools.

Students from all parts of Europe thronged his lectures; and his doctrines were widely spread over Holland and Germany. The School of Paris, under the influence of Riolan and Guy Patin, made a fierce war upon them; but, at a later period, they were disseminated over France and Italy.

Thomas Willis himself promulgated them in England. He was in full harmony with De la Boë, and accepted the doctrines of Paracelsus. He regarded all bodies, organic and inorganic, as constituted from the mystic elements, "spirit, sulphur, and salt," and that ferment, or the "intestine movement of particles," was the explanation of many of the processes of life and disease. The sensible properties and physical attractions of the animal fluids and solids depended upon the different proportions, movements, and combinations of these particles. These views were elaborately set forth by him in his treatise, *Pharmaceuticè Rationalis*, or Rational Pharmacy. The changes in the medical creed have relegated this work to oblivion,

but his description of nervous diseases, and his account of diabetes, the earliest on record, are acknowledged as "classical contributions to scientific medicine." Mr. Willis died in 1675.

SYDENHAM.

The next great luminary in the medical horizon of England, in the seventeenth century, was Thomas Sydenham. This "English Hippokrates," as his later admirers call him, had entered the university of Oxford in 1642, but belonging to the Roundhead party, he soon afterward abandoned his books to take a command in the army of the Parliament against Charles I. He graduated at Oxford in 1648 a Bachelor of Medicine, and it is supposed also pursued the study at Montpellier. Fifteen years later he passed the examination of the College of Physicians, and was licensed "to practice medicine in Westminster and six miles around." Finally, in 1676, he received the degree of Doctor of Medicine from the university at Cambridge, his son being at the time an undergraduate. Perhaps this last fact had some influence in the matter.

The fame of Sydenham, like that of most superior men who are benefactors, was chiefly posthumous. Making little display of his learning, yet boldly striking out a course for himself which was not according to the approved methods, though well acquainted with the works of the ancient physicians, and closely following Hippokrates, he was described as "not a profound man of science." He was greatly blamed for not using the professional jargon. To the day of his death, and for years afterward, he and his followers were stigmatized by the orthodox practitioners of the time as

"sectaries." The College of Physicians cherished little affection for him; at least, it never reached far enough from the heart to warm the shoulder. In a letter to Robert Boyle, written in 1688, the year before his death, Sydenham thus remarks: "I have the happiness of curing my patients—at least of having it said that few miscarry under me; but cannot brag of my correspondency with some others of my Faculty."

His writings comprise about six hundred octavo pages in Latin. He published a treatise on his *Method of Curing Fevers* in 1666, adding two years later, a chapter on the Plague, and a revised edition in 1676; a *Letter on Epidemics*, and a second on *Lues Venerea*, addressed to two Cambridge professors, in 1680; and a *Dissertation* in 1682, setting forth the treatment of small-pox and hysteria; a tract on *Podagra and Dropsy;* and, finally, the *Processus Integri*, an outline sketch of pathology and practice. Twenty copies only were originally printed in 1692; but it has been several times reprinted.

He made as little as possible of the dogmas and traditions of his craft. His predominant idea was to take up diseases as they presented themselves in nature. Most forms of ill health, he insisted, had a definite type comparable to the types of animal and vegetable species, and the conformity of type in the symptoms and course of a malady was due to the uniformity of the cause. He dwelt, nevertheless, upon the "evident and conjunct causes," the morbid phenomena, not seeking after causes that were remote. Acute diseases, like fevers and inflammations, he regarded as a wholesome conservative effort of the organism to meet the blow or shock of some injurious influence operating from without; following in this

the Hippokratic teaching, as he likewise did the method laid down by the illustrious Ionian, of watching and aiding the natural crises. Chronic diseases, however, were attributed by him to a depraved state of the fluids of the body, which was due principally to errors of diet and manner of life. "*Acutos dico, qui ut plurimum Deum habent authorem sicut chronici ipsos nos.*" Nevertheless, he introduced the practice of bleeding in fevers and inflammations to a degree that had before been unexampled ; and in this he was followed at a later period by men like Bran, Rush, Broussais, and the great body of practitioners of the nineteenth century, till the lancet of the physician became a more deadly weapon than the arms of the soldier. Honorable and praiseworthy as was his career in other respects, a greater misfortune than this innovation entailed can hardly be cited. It made the so-called art of healing an art fearfully destructive to human life. Yet Sydenham himself was awake to the vices of the depletive treatment, and as he remarked humorously but over-truthfully, he sometimes consulted his patient's safety, as well as his own reputation, by doing nothing at all.

In the treatment of small-pox he seems to have encountered the severest criticism. The stimulating regimen then in vogue, and most disastrous in its results, he utterly discarded, and instituted for it cool air and saline medicines, with a success that at that time was rare.

He declared that there was an "epidemic constitution" peculiar to every year and season, which he conceived to depend upon atmospheric, but more essentially upon inscrutable telluric causes. The prevalent type of the acute disease he observed to vary accord-

ing to the year and season, and he held that the right treatment could not be ascertained till the type was known.

For a time he was regarded with vague esteem among practitioners for his successful treatment of small-pox, his employment of laudanum and his advocacy of the use of Peruvian bark for quartan agues. Some, however, of the ablest and most talented men of the time, not hampered by narrow professional jealousy, were awake to his intrinsic worth. Boerhaave, of Leiden, was wont to speak of him to students as the Phœbus of the art, and the true type of a Hippokratic man. Haller, when arranging a Scheme of Medical Progress through the Ages, marked one of the epochs as beginning with Sydenham. The College of Physicians in 1810 built him a monument. "I believe," says his biographer, R. G. Latham, "that the moral element of a liberal and candid spirit went hand in hand with the intellectual qualifications of observation, analysis and comparison." To this eulogy Dr. Charles Creighton adds: "He is indeed famous because he inaugurated a new method and a better ethics of practice, the worth and diffusive influence of which did not become obvious, except to those who were on the same line with himself."

Among the correspondents of Sydenham were Morton, Robert Boyle and John Locke. The great philosopher was himself a physician of thorough training, and his hearty sympathy with the "English Hippokrates." He took occasion in a letter to W. Molyneux to compare the several methods then in vogue, and to give the preference distinctly to the now famous Englishman.

"You cannot imagine," he remarks, "how far a little observation carefully made by a man not tied up to the four humors, [like the Galenists,] or to sal, sulphur or mercury, [like the alchemists and followers of Paracelsus]—or to acid and alcali, which has of late prevailed [with the disciples of Willis]—will carry a man in the curing of diseases though very stubborn and dangerous; and that *with very little and common things, and almost no medicine at all.*"

It is perfectly natural, however, to seek for knowledge and methods which shall be ample for every exigency. It was therefore creditable to the medical investigators of the seventeenth century that they endeavored to develop theoretic systems which should comprise the sum of what was beneficial for human suffering. There may have been then, as we find it now, a love of ruling which impelled selfish men to lord it over their fellows, and to seek by arbitrary ethics, and even by intrusive legislation, to silence and crush those who did not subscribe to their requirements. Yet dogma is essential to an intelligent grasping of facts, and a physician without a theory is little else than a sorry empiric.

Sydenham, it is true, had a profound contempt for the book-learning of his time, and actually recommended a person desirous to study medicine, to read *Don Quixote* as a valuable work. Nevertheless he was well acquainted with the various systems of practice extant and only attempted to substitute for them the better method of studying the natural processes and their normal and abnormal manifestations. Simple treatment rather than complex prescriptions, he held, was generally most successful in restoring deranged functions of the body and restoring the normal

activity. Yet he had his theories, as any one can perceive, and he sometimes made complicated prescriptions. But he followed the Sokratic and Platonic method, to develop from the facts at hand the causes and conclusions, and to act as each case required, without regard to the symmetry of his theoretic views, or even consistency between his practice and avowed sentiments. He did what he judged best at the time for the patient, leaving the matter of dogma and hypothesis to be adjudicated by itself.

The seventeenth century which had been introduced by such men as Keppler and Galileo, was concluded with Isaac Newton. Medical theory kept in step with their advance, and itself entered upon a new epoch. When therefore, we begin with the succeeding century, we notice a continuation of the same notions, explorations, and schools of thought as characterized its predecessor; and indeed we must arrive beyond its first decades before perceiving any essential changes. It is so, however, in all ages; we can find few milestones in human progress to enable us to take a reckoning, yet when we survey mankind from age to age, we are not long in discovering that the world does move.

CHAPTER VI.

MEDICINE IN THE EIGHTEENTH CENTURY.

The new doctrines and scientific discoveries which had disputed the ascendency of the former time-worn dogmas and theories, continued to agitate the world during the earlier years of the eighteenth century. This period, in fact, was little else than a supplementary chapter to the volume. It was characterized, like the previous century, by innovation, controversy, and revolution. Materialism in science as well as in ethics was pitted against supersensualism, the flesh lusting against the spirit and each seeming to triumph in its turn.

The history of medicine exhibited the same peculiarities. At Leiden the physical and mathematical doctrines were preponderant; at Hallé the attempt was made to establish the animistic doctrine as sufficient to account for all that related to physiology, pathology, and the whole art of healing. European practitioners were divided in their allegiance between the respective teachers.

John Radcliffe, who had followed closely after Sydenham in avowed contempt for the book-learning then extant, disavowed all the medical systems of the time, remarking that he belonged only to the school of common sense. He is described as both a popular

and sagacious practitioner gifted with rare insight,* and he stood at the head of his profession in London. Like other despisers of literature he left no memorial. He was evidently willing to learn and profit selfishly from the labors of others, contributing nothing valuable in return.

His friend and disciple, Richard Mead, attained to greater distinction. He was the son of a Non-Conformist minister at Stepney and attended school at Utrecht, but having decided to study medicine he repaired to Leiden where Herrmann and Pitcairn were the principal lecturers. In 1695 he graduated at Padua as Doctor of Philosophy and Medicine, and returned to Stepney to begin the practice of his profession. In 1703 he was elected physician to St. Thomas' Hospital, and appointed lecturer at the Surgeons' Hall. On the death of Radcliffe, in 1714, he was recognized as the principal medical man of London; attending Queen Anne on her death-bed, and serving the Prince of Wales (afterward George II.) in 1727 as his physician. Mead was a man of remarkable mental activity and an ardent champion of the "mathematical doctrines" as taught at Leiden. "It is very evident," he says, "that all other means of improving medicine have been found ineffectual by the stand it was at for two thousand years; and that since mathematicians have set themselves to the study of it, men already begin to talk so intelligently and comprehensively, even about abstruse matters, that it

* He was sent for in December, 1694, to visit Queen Mary, then ill with smallpox. On arriving at the palace he first inquired of the court physicians what their treatment had been. They described it minutely. Radcliffe immediately said: "Gentlemen, the Queen is a dead woman; I wish you good morning." Then taking his hat he went away without even seeing her. His diagnosis of the treatment was correct; in a very short time the Queen died.

is to be hoped that mathematical learning will be the distinguishing mark of a physician and a quack."

Nevertheless, despite his tenacity of opinion and unseemly readiness to apply an opprobrious term to those who differed from his views, Mead was not successful in his own endeavors to make use of the Newtonian and mathematical principles for the explanation of bodily functions, and to show that atmospheric pressure and the influence of the sun and moon were the chief causes of disease. In 1702 he published a treatise on *Poisons*, explaining them as acting only on the blood. This hypothesis, however, he was compelled to modify; and, accordingly, in 1708, in a later edition, he ascribed the disturbances produced to the "nervous liquor," which in turn he explained as a quantity of the "universal elastic matter" (or luminiferous æther) that is diffused through the universe.

James Keill also endeavored to apply the same principles to the explanation of bodily functions, and with a great degree of success.

None of these men founded a School of Medicine. There were no medical colleges in England of a character to compare with the universities upon the continent of Europe; and experience showed then, as it does now, that for a physician to take high rank in the medical world, an academic position of rank was necessary. He must be a teacher if he would be a leader of his age.

BOERHAAVE.

Fortunately for his influence and celebrity, Boerhaave was fully equipped in this respect, as well as in

his profound learning and extensive information. He had also been a student of theology, and having received the degree of Doctor of Medicine from a humble institution in Guelderland, he immediately engaged with ardor in the studies belonging to the profession. In 1701 he was appointed to the chair of Institutes of Medicine at Leiden. He retained his connection with the university many years, succeeding Hatton as lecturer on Botany and Medicine, Bidloo in the chair of Practical Medicine, and afterward adding to these the professorship of Chemistry, and discharging also the office of Rector. In this way he worked incessantly, lecturing five hours each day and performing professional service. He was the organizer of the modern plan of clinical instruction; and the hospital at Leiden, though having but twelve beds, now became the centre of medical influence in Europe. Many of the leading physicians of England also took their degrees at the university, and the reputation of Boerhaave surpassed that of his predecessor De la Boë, as well as those who followed him.

In his inaugural address he praised Hippokrates as the model of the physician, but he avowedly followed the methods of Sydenham; from whom, however, he widely differed in the importance which he attached to ancient dogma, as well as modern discovery. Indeed, he aimed to form a system which should include the principal features of all the great teachers, taking the Hellenic teachings for the groundwork, and making the scientific acquisitions of his age available as the superstructure. Thus selecting his doctrines from the current notions of his age, he has been generally styled "an Eclectic," while at the same time his accepting of the theory of humoral pathology

also won for him the title of "the Modern Galen." In the language of his panegyrist, "he with wonderful address assimilated the Galenic doctrine of humors to his chemical doctrine, and gave them a specific character founded upon their chemical relations. The mechanical philosophy then attracting universal attention, added to the fabric; the vessels were cones and cylinders; and the fluids consisting of various particles adapted only to given apertures, were at times forcibly impelled and impacted in vessels to which they were not fitted, and consequently produced numerous complaints."

Futile and even injurious as we now would consider a treatment founded on such a hypothesis, Boerhaave, nevertheless, was everywhere popular. Peter the Great, of Russia, often attended his lectures; and a Chinese mandarin wrote him a letter. He was not simply a physician made by books and teachers, but was endowed with an intuition which enabled him to perceive and describe distempers before others could find any symptoms at all. He was simple in his manner, methodical and precise in his instructions, eloquent in language and graceful in delivery. He was often lively in his lectures, fond of mirth, but never coarse or satirical. In his profession he was diligent and condescending and his great skill enabled him to acquire wealth. He died with a fortune of two million florins.

One of his disciples, Van Swieten, carried his doctrines to Vienna and founded a school there; and his nephew, Kaauw Boerhaave, engaged in a lucrative practice at St. Petersburg. The latter was the author of a treatise upon the *Influence of the Nervous System.*

HALLER.

Another disciple of Boerhaave was the distinguished Albrecht von Haller, sometimes called the "Father of Modern Physiology." He was an incessant student and investigator, surpassing Boerhaave himself in his encyclopædic information, and more profoundly acquainted with the literature and biography of medicine than any other man living before or since. Graduating at Leiden he accepted the professorships of Medicine, Anatomy, Botany and Surgery in the university at Göttingen, then just founded by George II., as elector of Hanover. He was a brilliant experimentalist and a most prolific writer, composing eighty-six books and twelve thousand reviews of books in seventeen years, besides poetry. He was in many senses an innovator upon the doctrines in vogue among medical teachers. From the first he had accepted the theory of generation known as *epigenesis*, propounded by William Harvey, that the forming of the new organism takes place by the successive differentiation of a relatively homogeneous rudiment into the various parts and structures. To this theory, Malpighi had opposed the doctrine which Harvey styled *metamorphosis*—that the new being exists as an entirety in the ovum antecedently to the process of growing, and that all that occurred during gestation or incubation is the simple expansion or unfolding of organs that already exist. He had been led to this conclusion by observing with his microscopes that the body of a chick was seen in the egg before the *punctum sanguineum* makes its appearance. This was contrary both to the theory of Harvey, and also to the ancient opinions of Aristotle that still dominated the schools;

and the study of microscopic anatomy was denounced accordingly by the old physicians, who did not scruple to heap invective and calumny upon the head of Malpighi.* After a time, however, Haller accepted the new hypothesis, and his reputation as the first physiologist of Europe was powerful to secure its adoption. He also introduced the doctrine of *irritability* instead of that of an animal spirit, to account for involuntary muscular and nervous activity, explaining by it the various phenomena of the body.

His views were severely criticized all over Europe; but Faber of Paris adopted them, and other writers, like Cullen, appear to have been influenced by them. He has since been overshadowed, but he certainly made the university of Göttingen one of the most famous in Germany.

STAHL AND HOFFMAN.

The university at Hallé was founded in 1693, by Frederick I., and speedily became celebrated from the distinction acquired by its professors. The medical systems which they promulgated were accepted for many years by practitioners in Germany, and deserve attention for their prominent characteristics.

George Ernst Stahl was a graduate at Jena, and became physician to the duke of Weimer in 1687. Seven years later, at the earnest suggestion of his friend and fellow-student, Hoffman, he was made professor of medicine at Hallé, and in 1714 was appointed physician to the king of Prussia, dying at Berlin, May 14, 1734. His first publication, *Theoria Medica Vera*—the True Theory of Medicine—appeared

* His brother fought a duel over the controversy, killing his antagonist.

in 1707. It is a zealous protest against the materialism which was becoming prominent among teachers and writers upon medicine. "His principal title to glory," says Renouard, "is for having recalled the attention of his contemporaries to the natural tendencies of the animal economy to the reäction of the vital forces (or the soul) in diseases—a reäction and tendencies which physico-chemical doctrines too much lost sight of." (*History of Medicine*, page 534.)

Stahl accepted the humoral pathology on the ground that the health of the body consists in the conservation and maintenance of the fluids in a state of integrity and perfect mixture. Such a condition, however, can be regarded only as an effect; and the fundamental cause, therefore, must be the immaterial and rational soul. He believed with Des Cartes that all motion implies and requires the aid of a spiritual motive agency. All voluntary muscular motions are of this character, as none of the muscles are a force, but only the instrument of a force. It is equally true that the unconscious and invisible physiological movements and processes are *effects*, of which the soul or spirit is the producing cause.

Stahl recognized two morbid conditions; the one a *plethora* or over-fullness, the other a *cacochymia*, or depressed condition of the fluids. He taught that every pathologic affection was produced from the reäction of the soul against the morbific agent, and that the totality of the symptoms of any given case of disease only represented and indicated the succession of vital movements. Hence the physician should either do nothing, or direct his effort to aid the soul, which is the actual *vis medicatrix naturæ*, to restore the body to a normal and healthy condition. This, as will

be perceived, is the "expectant method," so much employed by the French. Stahl and his followers were largely in favor of *placebos*, and strenuously opposed to the use of active drugs, like opium and Peruvian bark; while bleeding, emetics and such like "remedies" were regarded by them with little favor.

This psychal principle, the soul or *anima*, corresponds closely with the *archeus* or ruling force of Van Helmont, and somewhat with the "nature" to which Sydenham so strenuously referred his causes. To it may be attributed many actions which are denominated instinctive, and those which are considered intuitive. Stahl was the reviver of *animism* in Germany. The theory was also adopted in France, but with modifications. Stahl had treated of no intermediary principle between the soul and the body, but Barthez propounded the theory of the *vital principle* or formative force, intermediate between the superior intellective element and the body.*

It is usual to skim over these theories with an air of indifference, as though they were too fanciful for serious inquiry, and hence they have been silently excluded from the medical curriculum.

Frederich Hoffman was also a professor at Hallé for almost fifty years, and owed much of his celebrity to

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* Paul Joseph Barthez was a native of Montpellier, where he received the degree of Doctor of Medicine, when he had only attained eighteen years of age. He was distinguished for having held numerous appointments and testimonials in other professions. He became consulting physician to Louis XVI. in 1780, and to Napoleon I. in 1802. He enjoyed a high reputation in Europe but not among English-speaking people. His principal work was the *Nouveaux Elémens de la Science de l'Homme* —New Elements of the Science of Man, and in it he unfolds his animistic doctrine of the vital or formative force. He was one of the strongest opponents of the theory which would explain the phenomena of life by physical or mechanical laws.

that fact, apart from his great industry and talent. He belonged to a family that had been engaged in medicine for two hundred years. He was born in 1660—the same year as Stahl, graduated at Jena about the same time as his famous colleague, and accepted the position of professor of medicine in 1693. He was reputed as a skillful physician, having the Emperor Charles VI. and Frederick of Prussia for patients; and he emulated the archiatrists of Rome, Greece and Egypt in rendering professional services gratuitously, and subsisting upon his professional stipend. He was an accomplished pharmacist as well as chemist, and both made and sold remedies, keeping the formulas secret.* At his death he made them over to the Orphanage at Hallé, which continues to derive an income from them at the present time. The *Anodyne* is still vended in this country, as well as other secret medicines under his name. Through his recommendation, many of the mineral springs of Germany came into repute as health resorts.

Hoffman was a philosopher of the school of Leibnitz, the alchemist and supposed Rosicrucian, who inculcated the dogma of a "preëstablished harmony between the soul and body." He imitated his great master by an endeavor to construct a system of medicine in analogy with this doctrine, which should harmonize the animistic and spiritual views of Stahl with the materialistic dogmas of other teachers. After the common manner of the time, he based his medical tenets upon a complete theory of the universe. The source of life he taught, was the *ether*, which pervades all things. It is breathed from the atmosphere, and

* A maxim of his probably helped to involve him in disfavor in professional circles: "Avoid medicines and physicians if you value your health."

keeps all animate beings alive. It assimilated in the brain, forming the *pneuma* or "nervous fluid" by which the body is sustained.

In regard to pathology Hoffman agreed substantially with his colleague; teaching that health depended upon the maintenance of a proper tone in the body, and that some diseases were sthenic, or resulting from excess of tone or "spasm," and others were asthenic or produced by atrophy or want of tone. His reputation stood very high, and his work upon *Systematic Rational Medicine*, written in Latin, was translated and passed through several editions.

MORGAGNI.

Pathologic Anatomy as a distinct branch of medical study originated with Giovanni Battista Morgagni. He was a native of Forli, and belonged to a family in good circumstances. He early displayed extraordinary talent, and in 1698, at the age of sixteen, began as a student of philosophy and medicine at Bologna, graduating with both Faculties as Doctor three years later. He next became prosector to Valsalva who had been a pupil of Malpighi, and succeeded him soon afterward as demonstrator of anatomy at the university. His reputation at this early age stood high, and in his twenty-fourth year he was elected president of the *Academia Inquietarum*, one of the associations of learned men and inquirers, with which Italy abounded. He signalized his management by discouraging the tendency to abstract speculation, then so general, and by enforcing exact anatomic observation and reasoning. He published his discourses to the Academy in a volume which established his reputation throughout

Europe. Resigning his post at Bologna he engaged in the practice of medicine in Forli, where he soon attracted a large body of patrons. His eulogist describes him as displaying the highest qualities of the physician: "*in observando attentus, in prædicendo cautus, in curando felix*"—careful in observing, cautious in predicting, fortunate in curing.

He soon tired, however, of professional work, and again sought employment as an instructor. The death of his friend Guglielmini at Padua made this attainable, and in 1712 he was appointed to the chair of theoretic medicine. He held the position with the highest honor till his death, sixty years later. Three years after this appointment, he was promoted by the Venetian Senate to the chair of anatomy, a place which had been filled by Vesalius, Fallopius and other illustrious teachers. He appears to have enjoyed uninterrupted prosperity. He received a bountiful stipend; he was highly esteemed by his fellow-professors; he enjoyed the friendship of distinguished senators and the highest ecclesiastic dignitaries; students from all parts of Europe attended his lectures; he was elected into the Academies of Europe and the Royal Society of England; and no person of any eminence in learning came to Padua without visiting and conversing with him, while all were charmed with his polished manners, his character and teaching. He was a many-sided man, writing on a variety of subjects, classic, historic and antiquarian, as well as medical. Indeed, he seems to have been diffident in setting forth his own professional attainments. He edited and published the works of Valsalva and Guglielmini, adding biographic sketches and commentaries of his own, noted for their exquisite elegance of style; but he

waited long before entering the field with his own productions.

Only two or three writers had attempted to describe the anatomy of diseased organs and parts of the human body. Many had deplored this omission; Harvey himself remarking that more was to be learned from the dissection of one person dying with consumption or other chronic malady than from ten that had been hanged. Théophile Bonet, of Neuchatel, indeed, had written the *Sepulchretum*, a work which Haller praised as being a pathologic library in itself. But it was prolix, often inaccurate and sometimes even misleading from its ignorance of normal anatomy. Apparent accident led Morgagni to take up the subject. He had just finished his edition of Valsalva in 1741, and was taking a respite from work with a young friend in the country. They were discoursing together upon the *Sepulchretum* and its defects, when the young man suggested that Morgagni should put his own observations upon paper. It was arranged accordingly that he should write a series of letters for his friend's perusal. Seventy of these were prepared, and finally in 1761 were published as a systematic treatise, in two folio volumes, entitled: *De Sedibus et Causis Morborum per Anatomen Indagatis*—the Seats and Causes of Disease revealed by Dissection.

The work was arranged in five books, each of which was dedicated to a representative of one of the five learned societies of which Morgagni was a member. It embraced the record of six hundred and forty dissections, and gives a description of the morbid conditions of the body through its entire extent. The symptoms during the course of the malady are prefixed, and discussed from the point of view presented

by the conditions after death. All ranks of life, from peasant to cardinal, furnished subjects for these letters. Many were cases of Morgagni's own early observation ; others were from unpublished records of Valsalva and Albertini.

This treatise was the collected observations, experiences and acquired knowledge of his lifetime. He was in his eightieth year, when, as Creighton elegantly remarks, "he brought out the great work which, once for all, made pathological anatomy a science, and diverted the course of medicine into new channels of exactness or precision." It was not only famous at the time from its author's great reputation, but to the present time, it is acknowledged that it was the beginning of an era of progress in pathologic knowledge and practical medicine. "Although Morgagni was the first," adds Mr. Creighton, "to demonstrate the absolute necessity of having diagnosis, prognosis and treatment on an exact and comprehensive knowledge of anatomical conditions, he made no attempt (like that of the Vienna School sixty years later), to exalt pathological anatomy into a science disconnected from clinical medicine and remote from practical needs. His orderliness of anatomical method (implying his skill with the scalpel), his precision, his exhaustiveness, and his freedom from bias are his essentially modern or scientific qualities ; his scholarship and high consideration for classical and foreign work, his sense of practical ends (or his common sense), and the breadth of his intellectual horizon prove him to have lived before medical science had become largely technical or mechanical. Symptoms from this time ceased to be made up into more or less conventional groups, each of which was a disease ; on the other hand, they

began to be viewed as 'the cry of the suffering organs,' and it became possible to develop Sydenham's grand conception of a Natural History of disease in a catholic or scientific spirit."

THE EDINBURGH SCHOOL.

According to Sir Robert Christison the first chair of medicine was instituted in the University of the city of Edinburgh in 1685, "through the energy and influence of three of the most remarkable medical men of the day in Scotland, Sir Andrew Balfour, Sir Robert Sibbold and Dr. Pitcairn." The latter was the instructor of Mead and Boerhaave, at Leiden. He had been somewhat undecided in his choice of a profession, applying himself in turn to divinity, law, and mathematics; finally entering on the study of medicine at Edinburgh, then pursuing it further at Paris and graduating at Rheims. He began practice in Edinburgh, but in 1692 became professor of medicine at Leiden. Having returned home, however, to fulfil an engagement of marriage, the father of the bride objected to her residence abroad; and Pitcairn settled once more at Edinburgh.

He appears to have been a man of jovial temper, fond of drink and disputations. He was often engaged in violent quarrels, both with physicians and clergymen; with the latter from his hatred of Calvinism, and with the former from professional rivalry. Desirous of procuring subjects for dissection, he applied for the unclaimed bodies of paupers. This proposition the chief surgeons of Edinburgh opposed, but he succeeded in obtaining the necessary permission from the Town Council, thus laying the

foundation of the "Edinburgh School of Medical Learning."

He was a determined adversary of philosophic explanations as well as of the iatro-chemical doctrines, and an avowed champion of the scientific or empiric method. "Nothing," he declared, "more hinders physic from being improved than the curiosity of searching into the natural causes of the effect of medicines. The business of man is to know the *virtues* of medicines; but to inquire whence they have that power is a superfluous amusement since nature lies concealed. A physician ought, therefore, to apply himself to discover by experience the effects of medicine and diseases, and reduce his observations into maxims, and not heedlessly fatigue himself by inquiring into their causes, which are neither possible nor necessary to be known. If all physicians would act thus, we should not see physic divided into so many sects."

As has already appeared, parties and rival schools of medicine were as numerous and rancorous as in later periods; each faction tugging at its own corner of the blanket and striving with all its might to pull it away from the others. Although governments were more arbitrary and despotic then, the expedient of establishing one party in medicine absolute and supreme over others had not been adopted in the United Kingdom.

Major Pitcairn, who commanded the firing of the first volley at Lexington, in the American Revolution, was a descendant of the Scotch professor.

Alexander Monro, the first, became professor of anatomy at Edinburgh in 1720. His principal fame rests upon the fact that he was the first to hold the place, and was the author of works upon osteology and

comparative anatomy. His son and namesake was appointed joint professor in 1756, and appears to have been an investigator of much merit and originality. He made many important contributions to our anatomic and histologic knowledge. His son succeeded to this professorship but was not so famous as his two ancestors. He did his part, nevertheless, in maintaining the reputation of the school.

WILLIAM CULLEN.

Scotch medicine, however, in the eighteenth century, boasted of William Cullen as one of its brightest jewels. He was a native of Hamilton, in Lanarkshire, and began his career as a surgeon's apprentice in Glasgow. Here he had access to an extensive medical library and attended several classes in the University. At the end of his apprenticeship he became surgeon to a merchant vessel and afterward settled as a practitioner in a rural parish. In 1734, at the age of twenty-four, he made his way to Edinburgh, then becoming somewhat distinguished for its medical school, and spent two winter sessions. He was also one of the founders of the Royal Medical Society and Students' Association in that city. Leaving Edinburgh he settled in Hamilton, where he soon gained a high reputation and was employed by the leading families, including that of the Duke himself. At this time William Hunter became his pupil, remaining with him three years. In 1740 Cullen took the degree of Doctor of Medicine from the University of Glasgow, and from that time confined himself to the practice of physic, relinquishing surgery to a partner. Four years later he removed to Glasgow. The medical school of

the university was as yet but imperfectly organized and Cullen became a lecturer on the theory and practice of medicine, botany, materia medica and chemistry. His ability as an instructor, his facility in imparting knowledge upon difficult subjects and his ardent enthusiasm attracted students and made him very popular. In 1751 he received from the king, at the instance of the Duke of Argyll, the appointment of professor of medicine, but he continued to lecture upon chemistry, of which he was passionately fond.

In 1756 he received from the town council of Edinburgh, the appointment of joint professor of chemistry in the university of that city, and held the chair for ten years. Four years later he delivered a course of lectures on materia medica, which were surreptitiously published in London and widely circulated. He was afterward appointed professor of the institutes of medicine, and in conjunction with Dr. John Gregory, gave lectures upon the practice of physic. He died in 1790.

Cullen's fame appears to have rested upon his ability as a teacher, rather than upon the speculations which he promulgated. He took exception to the doctrines of Boerhaave, then universally taught in the schools, and strongly opposed the humoral pathology. He was equally dissatisfied with the conceptions of Stahl, because they gave no countenance to the heroic practice which he inculcated and pursued. His theory placed disease in the solid structures of the body, and he divided the various forms into four classes : *pyrexiæ*, or fevers ; *neuroses*, or nervous disorders ; *cachexiæ*, or depraved conditions, as in scurvy ; and *locales*, or local complaints like cancer. He taught the doctrine of spasm or debility, attributing to it all the phenomena

of febrile disorders. He referred rheumatism to spasm of the muscular fibres arising from an incessant flow of blood to the origin of complaint, and gout to atony, especially of the organs of digestion. He rejected the notion of a peculiar morbific matter in these diseases, but in his explanation of scrofula and several others, he adopted the hypothesis of an acrimony of the fluids.

He laid great stress upon the agency of the *vis medicatrix naturæ*, and taught the existence of a nervous fluid and vital principle. He also ascribed a peculiar faculty to the brain, which he denominated "irritability of the sensorium" and declared that it excited the muscles to action independently of the mind and will. Upon this hypothesis his system was principally founded. The circulation of the blood, therefore, would not be explained by mechanical laws, the angles at which the arteries divaricated were represented as exercising little influence, and lentor, viscidity and acrimony, whether acid or alkaline, were regarded as having no tendency to produce diseases. The whole was resolved by him into motions regulated by the vital principles, and chiefly induced by the activity or torpor of the extreme arteries.

THE GREGORIES.

John Gregory, the colleague of Dr. Cullen, belonged to a family remarkable for hereditary genius. Sixteen of their number held professorships in British universities. David Gregory, of Kinardie, practiced medicine among the poor gratuitously. He was passionately fond of scientific pursuits, and having procured a barometer, he became involved in difficulty. He predicted changes in the weather, and was arraigned

before the presbytery of Aberdeen on the charge of witchcraft, but succeeded in proving his innocence. His death took place in 1720. His brother, James Gregory, was the inventor of the telescope which bears his name, and published several mathematical works. From him descended the professors of medicine who contributed to the reputation of the school at Edinburgh as well as other institutions with which they were connected.

The son and namesake of James Gregory occupied that position at King's College in Aberdeen, and was succeeded by his son, James, who died in 1755. The younger brother of the latter, John Gregory, completed his literary course at Aberdeen, and then attended the medical classes at Edinburgh University. In 1745 he went to Leiden to complete his studies, and while there received from the college at Aberdeen, without having made application for the honor, the degree of Doctor of Medicine. Returning home he was made professor of philosophy, but resigned it because it interfered with his practice as a physician. In 1755 he succeeded his deceased brother as professor of medicine at King's College. Nine years afterward he removed to Edinburgh, in the hope to enlarge his business as a practitioner, and was made professor of physic in the University.

James Gregory, his oldest son, accompanied him to Edinburgh, and there went through the course of classic and literary study, afterward, in 1774, graduating in medicine. Two years later the father died, and he succeeded to the vacant chair. In 1790 he was made joint professor of medicine with Doctor Cullen, who died soon after, leaving him in sole occupancy. He became the author of various philosophic and

literary works, and was generally acknowledged as standing at the head of the medical profession in Scotland. His classes increased in size from year to year till the time of his death, in 1821. Dr. William Gregory, the late Professor of Chemistry at Edinburgh, was his son.

THE "BRUNONIAN SYSTEM."

John Brown, of Scotland, has sometimes been styled the last systematizer of medicine. He was truly a "son of the people." His father had been a day-laborer in the parish of Bunkle, in Berwickshire, and he was born there in 1735. Young Brown was destined for the trade of a weaver, but his schoolmaster, perceiving him to be a youth of promise, persuaded his parents to let him study for the pulpit. Accordingly, at the age of twenty, he made his way to Edinburgh, and entered the classes at the university, supporting himself by private tuition. Presently, however, he abandoned theology for medicine, and having attracted the notice of Dr. Cullen, was employed by him as a tutor in his family, and on some occasions as an assistant in lecturing. A chair becoming vacant in the university, Brown aspired to fill it. Suspecting Dr. Cullen to be insincere or indifferent in regard to his claims, he broke off friendly relations and soon afterward undertook an independent course of lectures, promulgating doctrines of his own in opposition to those of his former patron.

He seems to have taken his cue, nevertheless, from Cullen. The latter taught that the strength or debility of the bodily organism depended upon a certain state of excitement or collapse of the brain and nervous

system. Brown based his theory upon the hypothesis of excitability. He inculcated that the whole phenomena of life, health as well as disease, consist in stimulus, and nothing else. The exciting powers were set forth by him as a joint activity of external forces and the functions of the system itself. These call forth the vital phenomena—"sense, motion, mental function and passion."* Diseases were classed as *sthenic* and *asthenic*, the result of an excess or deficiency of excitement and requiring treatment accordingly. The remedies for the former condition were bleeding, low diet and cathartic drugs; for the latter, stimulation. To his credit it must be added, that he regarded ninety-seven per cent. of the complaints as of the debile and asthenic character.

A theory so simple attracted followers, and both in Scotland and upon the continent of Europe, the "Brunonian system" was, for a time, cordially received. The fact that it formed a milder mode of treatment than the common method was a great recommendation, and Brown appears to have been the first advocate of the feeding treatment in fevers. He was sagacious enough to perceive that convulsions and deliriums, then commonly regarded as symptoms of inflammation, were very generally actual signs of weakness.

In England, where ideas or innovations from a foreign country or a subject province, are seldom willingly accepted, the new doctrine met with little

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* Bonnet, of Switzerland, living in the last century, published a work entitled *Palingénésie Philosophique*, setting forth the same doctrine, which was then current in Europe. All knowledge, according to his theory, originates in sensations; sensations follow vibrations in the various nerves appropriate to each; and lastly, the nerves are made to vibrate by the action of outward objects upon them. Ideas were described as sensations in condition only.

favor. In Scotland, Brown's own home, he had numerous partisans among medical students, and many personal conflicts took place between them and those opposing his views. In Italy, he received enthusiastic support. Rasoni, of Pavia, became a champion of the new doctrine, but afterward adopted in place of the theory of stimulation, his own notion of counter-irritation. Joseph Frank, also a professor at Pavia, was likewise a believer in the Brunonian theory, and upon his removal to the university of Vienna, taught it to his classes. Girtanner first proclaimed it in Germany, but had not the manliness to give the source. Weikard was their avowed champion. Roeschlaub promulgated them in a modified form. The students at Göttingen were zealous in their advocacy; indeed, the enthusiasm was as great in Germany as in Italy or Scotland.

Broussais evidently belonged in the same category. When lecturing at the Military Hospital of Val-de-Grace in Paris, he promulgated views similar to those of Brown, declaring the principal cause of disease to be over-irritation, which from being at first local, extended itself through sympathy to different parts of the body. He published an *Examen* of his doctrines in 1816, which drew upon him the hostility of the whole orthodox medical profession in Paris. In time, however, he was triumphant. The leading physicians adopted his opinions. Even the Medical School of Paris itself taught them, and Broussais became the professor of pathology.*

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* Blood-letting was a conspicuous feature of this mode of practice; and Broussais uttered as a maxim: "Bleed the patient till he is white." It became also the ruling practice in America, and is still continued in countries of Europe.

ERASMUS DARWIN.

Whether we are ready or unwilling to accept his hypothesis, Erasmus Darwin is deserving of respectful mention. He was a graduate of medicine at Edinburgh, and followed the practice of his profession at Lichfield, removing in 1781, at the age of fifty, to Derby, where he finished his career. He was of broad scholarship, full of ardent scientific enthusiasm, and novel if not bizarre in many of his notions. Like many of the medical writers of the Middle Ages, he recorded his ideas in verse. In his treatise entitled *Phytologia* he declared his opinion that plants possess will and sensation. The work, however, which contains the most significant of his views on medical subjects is the *Zoönomia, or Laws of Organic Life*, published in 1794. It contained both a system of pathology and a treatise on generation. In the former, he followed in the footsteps of Hoffman and others who had already noticed the peculiar sympathy or consensus which subsists between particular organs of the body. He went further, however, and demonstrated that their chief error consisted in the partial views taken of the physical economy. The living system had been considered as a simple whole, without a proper consideration of the reciprocal influence of the different organs upon each other. He further perceived that disease is generated and unfolded into form, as well as removed, by the same organic laws and forces by which the body itself is developed and preserved. Taking this as his starting-point and adding the observations of his predecessors, illustrated and confirmed by his own experience, he deduced a system of pathology and therapeutics which he regarded as

founded upon the general laws of animated nature. For example, he rejected the explanations which former writers had given of febrile disorders, assigning them to chemical and mechanical causes, and attributed, instead, the succession of symptoms to irregular actions of the nervous, vascular and absorbent systems; setting forth how, in consequence of the intimate relationship of the several organs and the influence possessed mutually by each, the derangement of one part is followed by similar or opposite affections of others.

His views of generation almost appear to have been taken from those of the distinguished scientist and philosopher who is the subject of the next division. They both taught "that one and the same kind of living filaments is and has been the cause of organic life."

"Would it be too bold to imagine," Darwin demands, "in the great length of time since the earth began to exist, perhaps millions of ages before the commencement of the history of mankind—would it be too bold to imagine that all warm-blooded animals have arisen from one living filament which the Great First Cause endowed with animality, with the power of acquiring new parts, attended with new propensities, directed by irritations, sensations, volitions, and associations, and thus possessing the faculty of continuing to improve by its own inherent ability, and of delivering down these improvements by generation to its posterity, world without end?"

SWEDENBORG.

A speculator and investigator into the same subjects among innumerable others was the celebrated

Emanuel Swedenborg. In his *Prodromus*, printed in 1734, as well as in his tractate upon the *Red Blood* he has prosecuted a course of study and reasoning analogous to that of Darwin after him. Though Swedenborg was a scientist equal to the profoundest of his time, he attached himself to no class of schoolmen—a circumstance which gave later writers a pretext to ignore him altogether. He, nevertheless, accepted the discoveries which had been made as means to enable him to develop the ulterior principle of things. His studies were without exclusiveness; he explored every department of learning and brought away treasures from them all. His genius, remarks Ralph Waldo Emerson, began its lessons in quarries and forges, in the smelting-pot and crucible, in shipyards and dissecting-rooms. He anticipated much of the science of the nineteenth century; anticipated the views of modern astronomy in regard to the generation of planets by the sun; in magnetism, some important experiments and conclusions of later students; in chemistry, the atomic theory; in anatomy, the discoveries of Schlichting, Monro and Wilson; and he first demonstrated the office of the lungs.

He was born when the notions of scholars were bursting from their cocoons of the previous centuries, taking new forms and with them developing new powers to soar, as well as to perpetuate their kind. Harvey had taught the circulation of the blood; Gilbert, that the earth was itself a magnet; Des Cartes, that vortical motion was the secret of Nature; Newton, the universal gravitation; Malpighi, that the all of Nature subsists in its least forms; Swammerdam, Leeuwenhoek, Winslow, Eustachius, Heister, Vesalius, Boerhaave, what they had learned by scalpel and

microscope. Swedenborg made himself familiar with all. He was a very Viking in his aggressive experimentation, thorough in his explorations, analytic in his methods, systematic in his elucidations, and "not to be measured by whole colleges of ordinary scholars." His scientific works, now translated into English, though perhaps somewhat obscure in their language from the employing of the terminology formerly in use, are a perfect mine of treasure for the earnest investigator. His accomplished translator, Dr. J. J. Garth Wilkinson, of London, speaks in no measured terms of his physiological and other knowledge. "Science," he remarks, "is no tradesman and works not for the improvement of any calling; but solely because truth is good. Such science for the human body has been cultivated by the non-medical Swedenborg."

Dr. Wilkinson likewise claims for him, with good reason, the first suggestion of a rational theory of pathology. "Strange as it may appear," he affirms, "the present science does not present any physiological knowledge of what these pathological states may be. The science which lies at the basis of pathology is not yet opened. Pains, aches, swellings, and symptoms generally, glide along the body by terribly broad bridges of structure, of which the anatomist wots not. Well, there is wanted somebody besides this prim anatomist, to unfold the case. Our Swedenborg, Licentiate of No-College, is one of the men in whose works we have found a beginning of instruction on this subject. He has wonderfully indicated for us many of the great bridges and highways of vibrations and influences, and in so doing has thronged with living states and forms parts which were previously

dispersed, lying in sand-heaps of cell-germs. To the New Pathology, which chronicles the passage of states through Man, he is as yet the most important contributor from the physiological side."

At the very moment, however, when his learning was in the highest repute all over Europe, Swedenborg superadded to his scientific labors, the teaching of novel religious and teleologic doctrines. He even declared with the greatest sincerity, that his spiritual senses had been opened, so that he was able to hold converse with spirits and angels, and be the witness of spectacles and occurrences in their world. It may be thought that in his case, as was affirmed of Sir Isaac Newton and others, that his long pursuit of exhaustive analysis had resulted in abnormal mental conditions. Those who knew him personally were of a different judgment. His scientific works certainly exhibit no such obliquity or aberration. Many things are recorded of him to show that his memorabilia were not all hallucination of disordered faculties, but the testimony of a clear-headed as well as conscientious man. Indeed, it may be shown, that there have been others in the world of medicine professing, perhaps, with less good reason, that they had attained analogous powers. "His dominant end was spiritual and moral," says his biographer, "and it preserved his mind alive in a long course of physical studies, and empowered him to see life and substance in the otherwise dead machinery of creation."

The effect of taking views so broad, profound, and at variance with the tendencies of the time, was that his works were very generally discredited. Men of titled distinction and professional rank usually treat every one entering upon their special field as an

intruder. We remember a clergyman who would not read our treatise upon the Soul on the pretext that the writer was a layman. Another clergyman rebuked the late Gerrit Smith for speaking in the pulpit on a Sunday, because he had not been formally ordained. So, too, the Protestant clergy of Sweden and other countries placed the theological works of Emanuel Swedenborg upon their index. His doctrines, however, now furnish much of the material for sermons and religious essays, great diligence being employed to prevent any divining of the source from which it was derived. Medical teachers followed the same examples. They regarded as an arrant heresy the doctrine, which he had taught so clearly and so conclusively, that disease has no independent existence, but is only disorder of the organism of the body. Indeed, all reform in the profession of medicine has come, and probably it must always be introduced, from outside of its ranks. None the less, however, is it regarded by the titled members as an offense or scandal, and they are ready and zealous to proclaim and inflict woe upon the individual by whom such offense shall have come. Yet, with them truth, though not its apostles, is certain to prevail.

The works of Swedenborg of most interest to the student of medicine and physiology, are his treatises upon the *Animal Kingdom*, the *Economy of the Animal Kingdom*, the *Philosophic Reasoning Concerning the Infinite*, the *Red Blood*, *Generation*, etc. All these have been translated by Dr. Wilkinson. No candid and intelligent person can read any one of them without a sense of profound wonder at the breadth of the writer's knowledge, and the enlarging of his own views and conceptions of the subjects therein treated.

RISE OF MODERN SURGERY.

"More than any other man, he made us gentlemen," is the tribute which Sir Benjamin Brodie pays to John Hunter. Before the eighteenth century surgery had been an art in low repute. The Council of Tours had denounced it as unworthy of a priest and beneath the notice of a scholar, and it had sunk to a mere handicraft that any man of mechanical ability could exercise. Its practitioners, in the sixteenth century, consisted of barbers, farriers, swine-spayers, cobblers and tinkers. Even Ambrose Paré was a barber. In the Prussian Army it was part of the duty of the regimental surgeon to shave the officers.

The attempt was made to exalt the calling once more to the rank of a learned profession. Of course, in Continental Europe the Governments were relied upon for the initiative. At Berlin, in 1714, Holtzendorff, the surgeon-general, founded a medico-chirurgic college, and a school of clinic surgery was joined with it in 1728. Laurence Heister, professor at Helmstadt and Altorf, published a system of surgery which became a text-book all over Europe. The University of Göttingen was established by the Elector of Hanover (George II. of England), in 1734, and the celebrated Haller immediately received the appointment of professor, to teach surgery in conjunction with anatomy, medicine and botany. In Paris, M. Petit won a high reputation, and his work on diseases of the bones obtained for him the complimentary title of father of that department of pathology. In 1731 the *Académie de Chirurgie* was established with him for its head. It at once set up a very high standard and was characterized by great exclusiveness. Finally, in 1743,

an edict of the government abolished the Association of Barbers and Surgeons, which had been established under Louis XIV., and so removed the obstacle to the exaltation of the latter calling in Paris to the distinction of a learned profession. Later on, the *Ecole Pratique de Chirurgie* was also founded, with MM. Chopart and Desault among the first professors. The latter made many invaluable contributions to operative surgery, its literature and apparatus.

The corporation of the Royal College of Surgeons at Edinburgh was established by James IV. in 1505, with authority to teach surgery and grant degrees. Its graduates give lectures on the various branches of medicine and auxiliary sciences, and these extra-academic courses are recognized by the university. It does not appear, however, that the college in earlier periods had any great influence in elevating the rank of its pupils. "In London and Edinburgh," says Dr. Charles Creighton, "the development of surgery proceeded on less academical lines, and with greater scope for individual effort." The elder Monro became professor of anatomy to the Company of Surgeons in the latter city in 1719, transferring his title and services to the university the ensuing year. As he was the first systematic teacher of medicine and surgery there he is regarded as the father of the Edinburgh Medical School. In both London and Edinburgh the Company of Barbers and Surgeons had long been in existence as one corporation. Under Henry VIII. the two professions, as both were considered, were united in one corporation; the barbers being restricted to blood-letting and the extracting of teeth, and the surgeons prohibited from "barbery or shaving." In 1745, the two callings were separated

by act of Parliament, and surgery then was ready to attain a higher eminence in the United Kingdom.

WILLIAM HUNTER.

Medical Study, both in England and America, is associated with William Hunter as in certain respects a pioneer. He was a seventh child in a Scotch family of Lanarkshire, and began his education for the pulpit. Religious scruples, however, deterred him, and he took the advice of Dr. William Cullen to turn his attention to medicine. He lived with Cullen as his student for three years, at Hamilton, and thought to go into partnership with him. He repaired to Edinburgh for a winter, in 1740, and the next season made his way to London. Here he was employed by Dr. James Douglas as a tutor to his son and as a dissector. In 1746, he delivered a series of lectures on operative surgery to a society of naval practitioners, and was asked to include anatomy in his instructions. He was eloquent as a speaker, as well as thorough in his teachings.* The next year he became a member of the Corporation of Surgeons. He, however, gradually renounced surgery for obstetric practice. In 1748 he was appointed surgeon-accoucheur to the Middlesex Hospital, and in 1750 received the degree of Doctor of Medicine from the University of Glasgow—an honor which he richly repaid. It would seem that he was honored on his reputation and not on having been a student of the institution. He also became a licentiate of the College of Physicians in 1756, just after his return from a lecturing course in America. In 1762

* At that time, in Europe, a complete course upon anatomy, comprised but twenty-three lectures, and the demonstrations were made upon a single cadaver, while to explain the operations in surgery the carcass of a dog was used.

he was consulted by the Queen, and two years after was made her physician-extraordinary.

His great weakness was an inordinate love for controversy. He had a fierce dispute with the Monros as to which had first been successful in injections of the tubuli testis. Unluckily for his reputation Haller had forestalled them both. He and his partner Hewson also demonstrated the office of the lymphatics, which afforded a theme for another contention with the rival Scottish professors. He also disputed the discovery of congenital hernia, which Haller had already described. His *Medical Commentaries* contain details of these matters. At a later period he quarelled with his brother John about the priority of a discovery, and the two became estranged for life. He pleaded in his own extenuation that it was a characteristic of anatomists to be impatient of contradiction, and that others ought to be patient with them, because "the passive submission of dead bodies" rendered the crossing of their wills less bearable.

His great work on the *Anatomy of the Gravid Uterus* was published in 1774, and will remain a lasting memorial of his scientific ability and enthusiasm.

Private dissecting-rooms and theatres for the teaching of anatomy, managed by eminent practitioners, were the favorite resorts for surgical and other instruction. William Hunter applied to Lord Grenville, then prime minister, in 1765, for the grant of a plot of ground on which he might establish "a museum in London for the improvement of anatomy, surgery, and physic," offering to expend £7,000 for its erection, and to endow a professorship of anatomy in connection with the institution. He was put off; his patience soon became exhausted and he undertook the enter-

prise in his own way, building a house for himself in Great Windmill street, with lecture-halls and rooms for dissection. Here he placed his collections in pathologic anatomy, natural history, minerals, shells, fossils, ancient coins and medals. All these would have become the property of his contemplated museum; but, as a result of the supercilious neglect of the British Minister, they were bestowed at his death, together with a classical library, which he had collected at great cost, and an endowment of £8,000, upon the University of Glasgow.

Hunter was passionately fond of lecturing He conceived, as he used to say, "that a man may do infinitely more good by teaching his art than by practicing it." His lectures are described as being of two hours' duration, simple in diction, but profound in matter and minute in demonstration, yet never dry or tedious, and richly illustrated by anecdote. In 1754 he visited America and delivered courses of lectures on surgery and anatomy accompanied by dissections, at Newport, Rhode Island, the first ever delivered in this country. He seems, however, not to have found what he regarded as sufficient encouragement, and accordingly returned to England in 1756, to enter upon a more brilliant career. He was thrifty and amassed a large fortune. Honors came to him. He was made a licentiate of the College of Physicians in 1756; he became physician-extraordinary to the Queen in 1764; he was elected Fellow of the Royal University in 1767, and of the Society of Antiquaries in 1768; and became, in 1780, an Associate of the Royal Medical Society, and in 1782 of the Royal Academy of Sciences in Paris. Though infirm in health he would not give up lecturing. His last lecture was given, in spite of protests

and remonstrances, but a few days before his death. He fainted at the close, and was carried home to die. This event occurred March 30th, 1783.

JOHN HUNTER.

"In this world," says Goethé, "there are so many voices, and so many echoes." True, the voices speak into the empyrean and are returned from it as by the photophone to those of subsequent periods having the faculty to perceive as well as hear ; the echoes are all around us and aspiring to drown the utterances and silence the speaker. There are those in learned professions who would disparage and even reject a gem because of its setting. We may follow an eloquent tongue and popular doctrine; the few and the true seek after real knowledge.

John Hunter echoed no man's opinions. Schools did not make him ; he made schools. The unconscious bias which pecuniary interest produces in others had no influence with him. He never truckled to win applause. His accomplished brother loved knowledge as if for the sake of being able to impart it, but he prized it for its own intrinsic worth, willing to share the treasure with others as a common benefit, rather than to employ it magisterially as a means to dominate over the minds of others. He had no sympathy with the empiric methods so much in vogue. He was unwilling to resemble "the Chinese philosopher whose knowledge consisted only in facts;" he aspired to learn the principles on which his art was based. For whatever he was to do or teach he demanded the reason. He had the spirit of the *philosopher* rather than that of the mere scientist.

His youth had fortunately been spent after a manner which did not impair the force of his genius. He was the youngest of ten children, and by no means robust in physical constitution; and so, not being hurried to school, was successful in avoiding the overteaching and overtraining in those studies and discipline which load the memory but surfeit the understanding. In 1748, at the age of twenty, he made his way to London to enter his brother's class in anatomy, and speedily became a skillful dissector. He next attended the lectures and operations of the celebrated Cheselden at the Chelsea Hospital, and afterward became a surgeon's pupil at St. Bartholomew's, where Pott was then engaged. Already he had begun the career of discovery and invention which was his distinguishing characteristic. While in his brother's class he ascertained and demonstrated the descent of the testis in the human fœtus, the ramifications of the nasal and olfactory nerves, the formation of pus and the nature of the placental circulation. This last discovery led to a life-long disagreement with his brother William, who some years after claimed it as his own.

In June, 1755, he was persuaded to enter one of the colleges at Oxford, but he left in disgust two months after, declaring that his true instincts would not permit him "to stuff Latin and Greek at the university." His brother, after returning from America, offered him the place of lecturer in his school, but his diffidence and lack of confidence in his ability to speak, led him to decline. An attack of pneumonia, in 1759, warned him to establish his health more firmly. He procured a surgeon's appointment in the army, employing his leisure in physiological and other scientific

researches. In 1763 he retired from the service on half-pay, and immediately began his career as a surgeon in London, eking out his slender income by teaching practical anatomy and operative surgery to a private class. He made a study of comparative anatomy, procuring the carcasses of animals from the Tower of London for his purpose. A rupture of the tendo Achillis prompted him to experiment upon the treatment of such accidents, and thus he laid the foundation of the modern practice. He was elected a Fellow of the Royal Society in 1767, and became also a member of the Corporation of Surgeons. He now began to take house-pupils; among whom were Edward Jenner, W. Guy, Dr. Physic, of Philadelphia, and Everard Howe. Among his students at the hospital, who were, by the way, never numerous, were Abernethy, Cline and Astley Cooper.

After 1772 he lived during the autumn at a house which he had built at Brompton, where he carried on his biologic researches. Jenner used to supply him with animals for his experiments; but he also procured them from all parts of the globe. Bees, hornets and wasps were diligently studied by him for twenty years. No man so busily engaged in professional practice ever conducted so many physiological and pathological investigations, yet he was scrupulous in regard to unnecessary experimentation. It was his maxim that "experiments should not be often repeated merely to establish a principle already known and admitted; but that the next step should be the application of that principle for useful purposes."

He also began, in 1772, to give lectures on the theory and practice of surgery. His purpose was to test his

own knowledge, and to express his views correctly. Others had misstated them and even taken the credit of them, his brother among the number. For two years he delivered his courses free, but after that he made the usual charge of five guineas. He surpassed other lecturers in the extent of the work, speaking on alternate evenings, from October to April, eighty-six lectures in all. He was unable to speak extemporaneously, but read his lectures in an embarrassed and ungraceful manner, hardly looking from the manuscript. His expressions were often unintelligible to his pupils. He had, however, none of the supercilious arrogance which some teachers are prone to exhibit. He would criticize freely his own errors as well as those of others, often declaring that he was likely to think differently upon a subject the next year. His desire and great incentive in lecturing was to be understood and appreciated; and he would, accordingly, at the close encourage and even invite his hearers to discourse, without reserve, upon what he had been saying. He taught others that he thereby himself might learn.

True surgeon as he was, John Hunter regarded operations as the acknowledgment of imperfect skill in the art of healing. He would even compare them to "the acts of the armed savage, who attempts to get that by force which a civilized man would get by stratagem." He aimed to dispense with them, wherever it was justifiable, and when unable to do this he sought to diminish their severity.

His ability was generally acknowledged. After the death of Pott, in 1788, he was recognized as the first surgeon in England. Already, in 1786, he had been appointed Surgeon-extraordinary to the king, and in

1783 he was elected a member of both the Royal Society of Medicine and the Royal Academie of Surgery at Paris. He now built a museum for his collections, which at this period had cost him $50,000. It was the ambition of his life to perfect it, fearful that nobody else would continue his work. "When I am dead," he remarked to a friend, "you will not soon meet with another John Hunter." Yet his biologic labors were little appreciated by his contemporaries in England. They were unable to divine his purpose. His conception of morphology as the only true basis of systematic zoölogic classification was admitted, but they regarded his investigations among the lower animals as worthless. Even Sir Joseph Banks, then president of the Royal Society, shared this sentiment. What Hunter did was, therefore, literally "without the solace of sympathy or encouragement of approbation," as well as without collateral assistance. He spared no expense to effect his purpose, but employed his income and exhausted his private fortune in the endeavor.

He seemed almost to do without sleep. He was engaged at the dissection of animals from six to nine each morning; then he received patients till twelve, visited out-door patients till four, when he dined. He did not drink wine, but fortified himself for his lectures by a dose of laudanum. After dinner he slept an hour; then employed himself in superintending experiments, preparing and reading his lectures, and making records of the day's dissections. He corrected and transposed incessantly whatever he wrote. He left a prodigious amount of manuscript at his death—"literally a cart-load," says his biographer—all of which, including his eighty-six surgical lectures, his

brother-in-law, Sir Everard Home, remorselessly destroyed.

His death seems to have resulted from the endeavor of his colleagues to cross him. The governors of St. George's Hospital had been induced, in 1793, to promulgate a rule that no person should be admitted as a student unless he presented certificates of having already been educated for the medical profession. This was aimed directly at Hunter. Two young Scotchmen presented themselves without such certificates, and he made application to the Board to relax the rule in their behalf. While he was talking one of his colleagues interrupted him with a flat contradiction. He retired immediately into the next room and fell insensible. He never recovered consciousness. His age was sixty-five. His body was privately buried, but in 1859 it was removed to Westminster Abbey.

Hunter was careless of achieving fame. "We are but beginning to learn our profession," said he, to his friends. He was impatient of the adhering of his fellow-practitioners to the time-honored errors of his profession; and used to say that if *he* had promoted professional knowledge it was because of his disposition to distrust opinions, and to examine every subject for himself. It was a maxim with him that, "no man was ever a great one who wanted to be one," and he never overcame his diffidence.

He is honored as having established comparative anatomy as a science, and for bringing to light the principles which after his death became the groundwork of the later teaching. He elevated the art of surgery from the rank of a craft to that of a profession, and in the expressive language of Sir Benjamin

Brodie, "more than any other man, he helped to make *us* gentlemen."

John Hunter extended investigation over a broader field, however, than surgery and the various departments of anatomy. He explored the realms of physiology, and sought to understand the philosophy as well as the phenomena of life. He did not accept any mechanical or chemical theory, nor reject the existence of the soul because he did not find it in the human cadaver. He was in no sense a materialist. "Mere composition of matter does not give life," said he, "for the dead body has all the composition it ever had." Being an agency leading to modification of matter, but not consisting of it, he taught that vitality "either is something superadded to matter, or else consists in a peculiar arrangement of certain fine particles of matter, which being thus disposed acquire the properties of life." He probably favored the doctrine of archebiosis, the genesis of living matter *de novo* in the absence of living parentage. There were, he declared, neither positive proofs for it nor against it. Life itself, he used to say, could be regarded as a *fire* or something similar, and might for the purpose of distinction be called "animal fire." He held that the blood possesses a vitality of its own, more or less independent of the animal in whom it circulates. The maintenance of that vitality is from the atmosphere. "Breathing seems to render life to the blood," he used to say; "and the blood continues it to every part of the body." Pathologic phenomena were discerned by him to be the results of perturbation of those laws of life by which the healthy organism subsists. Such notions were too profound and philosophic for the time and country in which he lived, but he lived in a world of thought above and beyond.

BICHAT.

Another genius of the eighteenth century to supplement the labors and discoveries of that period was François Xavier Bichat. He was a native of Thoirette, and his early instruction in medicine was begun by his father. He attended college at Nantua, and then went to Lyons to prosecute the study of anatomy and surgery. The revolutionary disturbances in that city led him to seek refuge in Paris, where he was adopted by the celebrated surgeon, Desault, as a member of his own family. Desault died in 1795 and Bichat repaid his service in true Hippokratic fashion, by editing his works and contributing to the snpport of his widow and son till his own death. In 1797 Bichat began to lecture independently, first on operative surgery, and afterward adding physiology to his course. He speedily became a popular teacher, and the new doctrines which he put forth commanded the attention of the medical schools of Paris. In 1799 he was appointed physician to the Hotel Dieu, which afforded him a wide field for observation. He prosecuted dissection on a more extended scale, and began a new classification of diseases and a work on Materia Medica. His ardor, however, was greater than his strength. An attack of fever was increased, if not occasioned by breathing the tainted air of the dissecting-room, and he succumbed July 22d, 1802.

His new views of physiology were published by him in three papers in the *Memoirs* of the *Société Médicale*, to which he belonged, and again in his treatise on the *Membranes*. But in his *Récherches Physiologiques sur la Vie et sur la Mort* he defines them more fully, and finally in his *Anatomie Generale* he sets them forth at length.

He was the first to simplify the study of anatomy and physiology by reducing the complex structure of the organs to the simple or elementary tissues which enter into them in common. His *Récherches* were important for the distinction which they set forth between organic nervous functions, and the office of the brain and spinal system. He classified life as organic and animal, and indicated the epigastric centre as the starting-point. "Life," he declared, "offers us two remarkable modifications, the one common to vegetable and animal ; the other belonging exclusively to the latter." The animal, therefore, he seemed to regard as the outcome of the other. "Thus it might be said," he remarks, "that the vegetable is only the sketch, or rather the groundwork of the animal ; and that for the formation of the latter it has only been requisite to clothe the former with an apparatus of external organs by which it might be connected with external objects." He was very clear in elucidation of the distinct features. He cited the fact of two hemispheres of the brain, the anatomic character of the spinal cord, and the arrangement of the cerebro-spinal nerves, as suggesting their duality and divisibility. The organic life, common to plants and animals alike, possesses the functions of nutrition essential to the maintenance of the whole ; and these in turn depend upon organic sensibility which "the zoophyte enjoys as perfectly as the most perfectly organized quadruped. While, therefore, the one is characterized by its right and left sides, and by its periodical cessations in sleep, the other is simple and individual; and so as Bichat remarks, "we *live* internally almost double the time that we exist externally." Nevertheless, while thus penetrating the mystery of

physiologic duality and setting forth the constitution of the cerebro-spinal organism, he seems not to have attained a concept as definite in regard to the epigastric centre. In fact, he associates the liver, lungs, heart and stomach as jointly constituting that important department in the animal economy. There, in his view, were the seats of the passions. "If in general," says he, "we refer to the epigastric region the sensible impressions of our affections, the reason is that all the important viscera of that organ are there concentrated."

Later investigators have carried their explorations further and demonstrated the existence of a distinct and extensive nervous system, having its beginning and centre at the solar or semilunar ganglion. This sympathetic or ganglionic system consists of the various ganglia of the viscera and spinal region with the various prolongations, bands and fibres which bind them to other parts and organs. From the solar or semilunar ganglion as the common centre, the rest of the organism proceeds as a plant from its germ, differentiating afterward into the various tissues and structures.

JENNER AND VACCINATION.

Edward Jenner was the son of a clergyman in Berkley, England, and was born on the 17th day of May, 1749. He received a common English education, and then became an apprentice to Mr. Ludlow, a surgeon at Sodbury, and afterward a pupil of John Hunter, with whom he remained two years. When Captain James Cook returned from his first voyage, Sir Joseph Banks, who had been the naturalist of the expedition employed Jenner to help him in preparing his collections.

Jenner afterward, at Hunter's request, prepared papers on the habits of the cuckoo and hedgehog. One of them was communicated to the Royal Society, and he was elected a Fellow. In 1792 he received the degree of Doctor of Medicine in absence, from the University of St. Andrew.

For more than a century epidemics of small-pox had occurred. The disease had been long known in Asia, but its first mention in England was by Holinshed, who applied the name inaccurately to the visitation of plague in 1377.* The disease was observed to be epidemic in France in the sixteenth century, and received the name of *petite verole*. It appeared afterward in England, but not so severely as to excite alarm till 1667.

One form of epidemic is usually succeeded by another analogous to it. With the ceasing of the plague in 1667 small-pox appeared. Like its congener, the Asiatic Cholera, it had been chiefly circumscribed to Asia; but now, from some occult cause, it broke through its former limitations and became of periodical recurrence in the West. It was not, however, till 1667, that the total of deaths from small-pox in London became a large one.

Lady Mary Wortley Montagu, having accompanied her husband when ambassador to Turkey in 1716, became acquainted with the practice of inoculation. She afterward persuaded Doctor Maitland to introduce it into England. But it was observed that the patients were about as liable as ever to contract small-

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* H. Strickland Constable: *Our Medical Men*. "An eminent physician once said to me that all the Zymotic diseases from nettle-rash to Oriental Plague, are probably only varieties of one thing, dove-tailing into each other with infinite complexity, like colors."

pox; and several persons, among whom was the youngest son of King George III., died with the disease thus produced. Dr. Bromfield, a surgeon of the Court, and Dr. Langton, of Salisbury, attacked the practice in pamphlets. All this, however, did not convince practitioners. As is generally the case, a radical change of sentiment requires a new generation of men. Nevertheless, many non-medical men became very distrustful.

It had been observed among the dairy farms that milkers sometimes contracted a peculiar pustular disorder from the nipples of milch cows. In 1774 a man in Dorsetshire named Jesty inoculated his children with the purulent material. It produced a disease which it was conjectured, might be a preventive. Jenner took up the notion, but was met with example after example in which milkers so infected had afterward contracted small-pox. He propounded the hypothesis that the bovine disease was a form of variola. He modified his theories repeatedly, till the efforts of others led to a more uniform statement.

Dr. H. Woodville, of Edinburgh, had also become interested in the matter, and being a man of tact and energy, succeeded in gaining more general favor for the new procedure. It was now introduced into Europe and America, and gradually made its way to a wide approval.

In the latter half of the nineteenth century, it has been enforced very generally by compulsory legislation; and soldiers in the armies, sailors in the navy, pupils in the public schools, and even members of private families are arbitrarily obliged to submit to it, often repeatedly.

Nevertheless, compulsory vaccination is nowhere popular. In Switzerland the people obtained a

referendum or plebiscite, and defeated an enactment for it by an overwhelming majority. In Great Britain the recent Parliamentary Commission reported favorably to the removal of compulsion, and the Parliament in 1899 enacted that parents and guardians having conscientious objections to the practice, their children might be exempted. Similar dissatisfaction exists in other countries. The dependence for the enforcing of this operation is chiefly upon arbitrary power, and arbitrary power is always acquired at the expense of virtue.

MESMER AND MESMERISM.

If it was a deserved tribute to Galvani, Volta and Faraday to give their names to their scientific inventions, a like consideration would warrant a similar recognition to Anton Mesmer. Besides, the term that has been invented, *hypnotism*, does not imply in its etymology all that "Mesmerism" means; and we hesitate accordingly to accept the substitute.

Like other knowledge, the facts and phenomena of Mesmerism have been known for ages. The Ionian and Hellene philosophers comprehended something of them; priests in the temples practiced the art, and paintings in the tombs of archaic Egypt represent patients in the magic sleep.*

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*The term *magic* anciently signified everything venerable and scientific, but has been later degraded to an evil meaning. It has been used to decry skilful inventions, recondite knowledge, and beliefs that did not conform to the prescribed standard. The Roman Emperor Valentinian seems to have set the example; and since that Pagans, Gnostics, heretics and Jews have been punished as guilty of sorcery. In France witchcraft (or wisdom-craft) is termed *vauderie* or Waldensian art. The first person executed on the charge in the North American Colonies, was Margaret Jones, of Charlestown, Massachusetts, 1636. Her real offense was that she denounced blood-letting and kindred medical practice, and treated the sick with vegetable remedies. In Danish law, the designation of witchcraft is *quacksalverie*, or use of mercury, and a Homœopathist was, not many years ago, imprisoned in St. Thomas on that charge. But the "witch-herbs," belladonna, Veratrum, aconite, etc., are now accounted official.

Paracelsus, occupying a middle place between former lore and the later learning, did not hesitate to use the term magic in its genuine sense as denoting knowledge of the highest order. To him also must be given credit for very explicit descriptions of animal magnetism. The "mumia"* was defined by him as the "true elixir vitæ" which contains within it the potency of the life itself. "It may act from one human being directly upon another," he affirms; "or it may be connected with some material and visible vehicle, and be employed in that shape."

There is reason, however, to suppose that the art as explained had been understood by others before Paracelsus. As much was intimated by Avicenna and others of the Arabian School, and, indeed, by Hippokrates himself in advance of all. It has since been set forth by Kircher, Cornelius Agrippa, and others of later time.

In 1758 Joseph Gassner, a priest in Swabia, began similar procedures. He taught that diseases arose from obsession by evil spirits and employed paraphernalia and a peculiar manner influential to impress and overawe the credulous; nevertheless, he effected wonderful cures, and had a great reputation in higher circles. From him and by observing his procedures Mesmer derived many of the conceptions.

Friedrich Anton Mesmer was born at Weiler, in Switzerland, in the year 1734. He studied medicine under Van Swieten and De Haen at the University of Vienna, and received his degree in 1766. His inau-

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*This term is from the Persian and denotes an envelope or covering. It is derived from *mum* signifying wax, and, as applied in Egypt, either relates to wax used in the embalming of the dead, or else to the body as enveloping the soul.

gural thesis was entitled : "*On the Influence of the Planets Upon the Human Body.*" Pursuing his investigations, he discovered the art of inducing catalepsy or artificial somnambulism. Perceiving that magnets were not necessary in the procedure, he adopted for the art the designation, yet widely recognized, of "Animal Magnetism." His first attempt to make known his discoveries was in 1775, when he published a little work entitled : "*A Letter to a Foreign Physician,*" setting forth the invaluable results which it afforded in medical practice. He established a hospital in Vienna for the reception of patients, but encountered bitter persecution, which compelled him to leave Germany.

Coming to Paris he soon became widely celebrated, and many noblemen were among his patrons. Finally in 1784 a Royal Commission was formed at Paris, consisting of four physicians and five savants belonging to the Academy, to make an investigation of the claims of the new Science. Of the number were : Bailly, Lavoisier, the chemist; Jussieu, the naturalist; Dr. Guillotin and Benjamin Franklin, of America. M. Bailly prepared the report, but he came short of meeting the issue, and the report, so far from producing conviction, actually imparted new confidence to the champions of the new science. D'Eslon, Bergasse, the Comte of Puysegur and others, continued their investigations and experiments, reporting results which even now seem visionary and fanciful. Clairvoyance and other phenomena were among their discoveries. France, ever since, has furnished the ablest expositors and practitioners of the art, and it won recognition from the Academy in the coming century.

HAHNEMANN AND HOMŒOPATHY.

The cardinal doctrine of Homœopathic Medicine, *Similia similibus curantur*, or similars as remedies for their counterparts in disease, had been suggested many times in former centuries. Even Hippokrates himself made observations which might have culminated in a genuine Homœopathic practice. The alchemists among the Arabian physicians had similar conceptions. Paracelsus was positive in his declarations. "*Simile similis cura, non contrarium*," he boldly affirmed: like cures its like, and not that which is contrary. "Whoever will practice the medical art with merit may make insignificant things efficacious," he again affirmed. "A fever is not cured by a cold, nor a cold disorder by heating. On the contrary a similar often cures disorders of a like character."

Not, however, till the latter years of the eighteenth century was the concept elaborated into a distinct method and promulgated as such to the world.

Samuel Christian Friedrich Hahnemann was born at Meissen in Saxony, April 10th, 1755. He pursued the study of medicine at Leipsic and Vienna, taking the degree at Erlangen, in 1779. He returned to Leipsic in 1789 and engaged in the translating of foreign medical books. While employed in this way upon Cullen's *Materia Medica* he was forcibly impressed by several of its discrepancies as well as by contradictions which had fallen under his own observation. Taking the hint from Haller, he himself undertook a system of experimentation to ascertain the effect of different medicines upon persons in health, and from the results he deduced his conclusions.

Setting aside the rule of "contraries" as established by Galen, he affirmed the hypothesis of similars; that

the medicine which would produce a certain morbid action upon a person otherwise in health was the proper specific remedy for diseases of an analogous character. He propounded the dogma that a disease is manifested by the symptoms; that these symptoms as a whole constituted the disease, adding that it is not caused by a material substance, but is always a peculiar derangement of the health. He accordingly declared that diseases are spiritual dynamic derangements of the spiritual vital principle. The cause, therefore, would not be perceptible to the corporeal senses. He attributed chronic diseases, not so much to the contamination of morbific material as to a psoric miasm; excepting those, however, which are due to syphilis or sycosis. He summarily discarded the practice of bleeding patients, but had a strong faith in drugs when administered according to his theory. He regarded them as the real curative agencies, and prescribed them according to their pathogenetic power.

It was a doctrine in pharmacy that the combining of several drugs in a prescription increased the efficacy. Indeed, scores of ingredients were often thus included, sometimes of materials nauseous and even absolutely too filthy to name. Each drug was regarded as auxiliary to the others. Hahnemann, on the contrary, directed only a single medicine at a time. Nor did he rest content with innovations that were chiefly negative. He pushed his way into a new field with another sky and atmosphere. It is a matter of history that few comparatively have found it, and a larger part of them have not tarried. Hahnemann proclaimed the theory of attenuation, by means of which the body of each drug should be reduced to minute-

ness, while the actual virtue as a remedy should remain. This was to be effected by trituration, succussion and dilution. These processes, he insisted, brought into operation "the spiritual power which lies hid in the inner nature of medicines."

Administered in bulk this would not and could not be, and the condition of the patient, he insisted, would be made worse. In the new form, however, no medicinal disease would be produced, and at the same time the subtile cause of the evil would be encountered on its own ground in the interior nature.*

Hahnemann continued to publish his views and to treat patients in accordance with them, steadily gaining adherents. But in Germany, as in America, there arose in the earlier years of the nineteenth century a movement among the less scholarly but more numerous grade of physicians to suppress rival modes of practice by arbitrary measures. Persecution was kindled against Hahnemann, and finally he was forbidden to prepare or dispense his own medicines. He accordingly left Leipsic in 1821 and became physician to the Grand Duke of Anhalt-Köthen. In 1835 he removed to Paris. Here he was consulted by patients of every country and in all walks of life. His death took place in 1843.

EVOLUTION OF MODERN CHEMISTRY.

The modern science of Chemistry appears to have had its inception in the theories of the chemiatric school of the sixteenth century. De la Boë, the

* Dr. John B. Newman, in his work on *Fascination*, pronounces Homœopathy a disguised form of mesmerising. The manipulation of drugs he describes as mesmerising them, and cites a direction of Hahnemann, "in serious cases to stroke the patient down with the palm of the hand till relief is obtained."

founder of that school, taught that zymosis or fermentation was the important factor in vital processes, and that the disturbing of them produced activities. From these he held that fevers and other disorders took their rise. These activities were sometimes of an acid and at other times of an alkaline character. He accordingly made use of chemical preparations for remedies.

These doctrines were enforced by him during his career as professor at the University of Leiden. They were further elaborated by others after him, and prepared the way for the scientific concept of chemical affinity.

Robert Boyle was the first to contest the views of De la Boë. He was a many-sided man, and equally at home in theology, philosophy and physical science and wrote extensively on all these subjects.

It was his belief that there existed a "first matter," parts of which differed from one another in certain qualities or accidents. He doubted whether all compound bodies consisted of the same number of elementary principles. Like his contemporary scientists, Boyle was a believer in the transmutation of metals; and by his influence the statute of Henry IV., prohibiting the making of gold and silver, was repealed.

Becher and Stahl, however, were the first to develop the theory—chemical action and the constitution of compounds. They enumerated as the four primal elements: water, acid, earth, and phlogiston or the essence of fire. Their expositions, curiously as they may now sound, were legitimately deduced from the premises, and seemed to account very fairly for the various changes in bodies. Sir Isaac Newton likewise contributed his researches in regard to the

nature of gases and the method of generating them. Dense bodies, he taught, were rarefied by the process of fermentation into the several kinds of air. He also further observed that the atmosphere contained particles of different nature, by which it was fitted to be the breath of life to vegetables and animals.

The next long step was taken by Dr. Joseph Black. He had been a student of Dr. Cullen at Glasgow, under whose instruction he acquired a superior skill in chemical manipulation. He made the discovery which was destined to overthrow the theory of phlogiston. He demonstrated that the caustic property of alkalies did not depend upon the absorbing of a suppositious fire-essence, but upon combining with a gas that was not identical with the atmosphere. This gas he termed "fixed air," as not being found separate, but combined with solid bodies. He also proved the existence of latent heat.

Joseph Priestley was the next contributor to chemical knowledge. He was a native of Yorkshire, and his earlier education under the Rev. Philip Doddridge had been chiefly directed to theology and the ancient languages. He became distinguished for extraordinary proficiency, and also for heterodoxy of belief. He was at home in every department of learning and speculation. His literary works embraced such themes as mathematics, grammar, history, philosophy, physiology, theology, logic, the interpretation of prophecy, physical science, politics and sociology. He advocated the American side of the controversy in 1775, and the Republican cause in the French Revolution. Thus he belonged to the coming nineteenth century, rather than to the eighteenth, and he encountered the experiences of a man living in

advance of his time. Making the acquaintance of Dr. Franklin, he wrote a treatise on Electricity, and was elected a Fellow of the Royal Society. James Watt and Erastmus Darwin were his familiar friends.

He was widely awake to the necessity of scientific attainment as a means to liberalize education. His erudition was so extensive that it was contemplated in 1771 to appoint him to accompany Captain Cook to the South Sea; but he was rejected on account of his religious sentiments. In 1774 he published the account of his experiments with the carbonic, chlorine and nitrogenous gases. In this was contained his eventful discovery of oxygen, or as he named it, "dephlogisticated air." The scientific world had not yet outlived the hypothesis of phlogiston; but this fact interfered rather with classification than with the results in the field of science.

While Dr. Priestley was serving as preacher at Birmingham, in 1791, his house and chapel were burned by a mob. The rioters waded knee deep in manuscripts, the labor of a lifetime, and they were utterly destroyed. In 1794 he emigrated to America and made his home at Northumberland in Pennsylvania. He continued his researches ten years longer, dying in February, 1804.

Henry Cavendish in a measure supported the work of Dr. Priestley, and earned the distinction of Father of Pneumatic Chemistry. He demonstrated the radical difference between hydrogen and nitrogen, and showed that water which had been regarded for unknown ages as a single element, is itself a compound. Yet the savants of the time almost unanimously regarded the proposition as incapable of defense. They could not conceive that water, being itself incombustible, should have inflammable air for

a constituent. Nevertheless Cavendish as well as his opponents accepted the hypothesis of phlogiston.

At this period every discoverer had recorded his work and endeavored to explain the results in conformity with the accepted theories. These were often based on defective hypothesis, and the nomenclature was often so imperfect as itself to constitute a serious difficulty. The student endeavoring to master the science had need of great acumen to keep from being led astray. It was time for a man to appear who was able to verify the several discoveries, to trace the relations of the various substances, to correct the former errors, and to make a classification of the elements and their compounds which would enable the student to perceive readily their constituents.

Antoine Laurent Lavoisier was born in Paris in 1746. His father, a wealthy tradesman, gave him a thorough chemical education, and encouraged him in his scientific pursuits. The discoveries of Black, Priestley and Cavendish had unfolded the possibilities of Chemistry. Lavoisier repeated their experiments, sometimes contradicting their theories and even somewhat arrogantly claiming their honor. As early as 1765, when barely nineteen years old, he published his doubts of the theory of phlogiston, and ten years later he described the preparations and properties of oxygen, but made no reference to the discovery by Priestley.* He next found out the constitution of the atmosphere, and followed by the theory that "dephlogisticated air" was the universal generator of acids and metallic bases. He also abandoned the notion that hydrogen was the phlogiston, which had been generally adopted by the chemists of all Europe.

*As Dr. Priestley was an Englishman and a Unitarian in religion, Lavoisier being a Frenchman and a Catholic, superciliously ignored his existence.

Liebig says of him that "he discovered no new body, no natural phenomenon, that was previously unknown; but all the facts established by him were the necessary consequences of the labors of those who preceded him. His merit, his immortal glory consisted in this: that he infused into the body of science a new spirit; but all the members of the body were already in existence, and rightly joined together."

Lavoisier, with the aid of several learned and devoted friends, was enabled to effect his purpose of a more perfect system of classification. In 1787 he brought out the Chemical nomenclature, consisting to a great extent of a new terminology comprising names which assured a ready comprehending of the constitution of the compounds. For a while the innovation was hotly opposed, and Lavoisier was burned in effigy in Berlin.* Nevertheless the new classification has been generally adopted, and is still in use, somewhat modified, however, in later years. In 1794 Lavoisier was arrested and sentenced to the guillotine. The applications for mercy on the ground of his services as a scientist were met with the reply: "The Republic has no need of savants." La Grange paid him the tribute: "A moment suffices to cause his head to fall, but a hundred years will not be long enough to produce another like it."

The subsequent history of chemistry belongs entirely to the nineteenth century. Gay-Lussac, Dalton, Berzelius, Dumas and others have extended the field, and enabled the mode of classification to be greatly improved. Oersted, Sir Humphrey Davy, and his great disciple Michael Faraday have elucidated electromagnetism and traced its manifestations in

* Some of this feeling appears to still exist in Germany. The medicines produced in the laboratories and especially those used by Homœopathists, originally a German School, are generally named after the former style.

chemical affinity and decomposition. All these matters, however, pertain to publications of a different character. We have only to do with the relations of the science to the medical art. From the time of Geber, alchemy and the later chemistry have in turn been regarded as auxiliary to the science of healing. The simples, which earlier physicians chiefly employed became less and less esteemed, and were largely abandoned to housewives and rural practitioners of modest pretensions. Chemistry almost superseded Botany in the medical curriculum.

THE CLOSING OF THE EIGHTEENTH CENTURY.

The eighteenth century was remarkable as a period of transition. The political changes great as they were, had not been the principal occurrences. There were upheavals in the different countries from the very foundations of society, and new theologic opinions had begun to crowd into the back-ground the dogmas which had been made sacred by their age. Columbus adding a new Continent to human knowledge had placed a fulcrum for Arkhimedes to overturn former beliefs, and James Cook supplemented the work by revealing the wonders of the Ocean.

Science expanded its boundaries and required the establishing of new departments. Botany, Chemistry, Astronomy and Physics all received new impulsion, which has gained in force, increasing the scope of human knowledge, and accumulating discoveries till we are hardly able to enumerate them, and it seems almost impossible for the world itself to contain the books that record them. Electric science had its beginning with Franklin, who was speedily followed by Priestley, Galvani, Volta, Oersted and others; and

now it is including every field of human enterprise, as though entirely competent to fulfil every want of man. The savants of the French Academy, however, had not ceased to laugh at the concept of moving vehicles and navigating by steam, but the time was near when derision was to be superseded by wonder.

The Medical Art, as has been already observed, had undergone many transformations in theory, variable and somewhat indefinite, but by no means insignificant. Surgery was removed from the stall of the barber and exalted into a profession at its side, as requiring both learning and artistic skill. The arena of medical theory exhibited the spectacle of numerous hypotheses and conjectures, as well as important discoveries. Mear taught that the sun, moon and stars influenced the functions of the human body; Stahl held that phlogiston, the essence of fire, was a constituent of natural objects, and that the soul was the source of health and disease; Haller insisted that the virtues of medicines should be ascertained from their effects upon healthy persons. Bichat gave the results of his investigations in anatomy and neural physiology, which led the way to the establishing of a new school of medicine. Morgagni presented his investigations in morbid anatomy, so essential to a correct knowledge of pathology. Fothergill explained diphtheria and neuralgia, forms of disease which had been before but little comprehended; Abenbruzzer invented the art of diagnosis by percussion; Cullen ventured upon a classification of diseases analogous to that of classes, orders, genera and species in Botany; Brown propounded the hypothesis that diseases were purely sthenic and asthenic; and others brought forward favorite notions as so many contributions to the lore or medicine. Van Swieten, under the patronage of

Maria Theresa, revived the Vienna School of Medicine, which now became the most distinguished in Continental Europe. Here Hahnemann and Mesmer received the preliminary technical instruction which equipped them for their respective undertakings.

There were many others who had their concepts to offer as additions to the general stock—numerous wand-bearers, but few who gained a place inside the shrine. The common people in many districts retained the ancient prepossession in favor of a pure vegetable pharmacopœia. The works of Culpepper had largely fixed this sentiment in England; and there was also a considerable literature of modest pretensions extant over the kingdom. We read of Botanic Gardens in England and upon the Continent; one of these is mentioned in the "Encyclopædia Britannica" as having been maintained by a Miss Elizabeth Blackwell. In the absence of schools for instruction in Botanic Practice, like the colleges of John Hunter, Cheselden and Abernethy, the practitioners taught the use of simples to their students. A condition of affairs very similar, existed in several parts of Europe.

The philosophic element appears to have been substantially eliminated in later years from medical study, and to have given place to methodic empiricism. The crisis of the Century occurred in the French Revolution, which changed the old habits of thought, shook Society to its foundations, introduced new principles of legislation, and gave new impulses to intellectual pursuits. It was to be expected that the medical art, despite the reluctance toward innovation, should participate in the transformations. Indeed, so completely had this been the case that when the nineteenth century began, it only continued what had been already set in operation.

CHAPTER VII.

THE FORMER YEARS OF THE NINETEENTH CENTURY.

It seems to be a conceit of every period of history that it is more enlightened than the preceding ages. Every generation of humankind appears to imagine that it has arrived somewhere near the final principles of knowledge, and that its horizon comes very near toward including all the sky and all the earth. The younger ones in a community are eager to exalt themselves by depreciating the attainments and experience of others. Egotism commingled with vanity, when it is made conscious of knowledge and wisdom beyond its own circle of vision, is very prone to put forth the effort to show them not to be worth the possessing; and when their value cannot longer be thus concealed, then to make the pretense that all had been possessed already.

The expositors of medicine in the Nineteenth Century often display these proclivities in their completeness. It is common among those who loudly boast of belonging to an "ancient and time-honored profession." They rail at the barbarisms, the superstitions, and the passion for comprehensive theory which prevailed among those who preceded them. The century was ushered in by such a disposition among those who aspired to be the leaders in profes-

sional circles. Every writer seeking prominence appears to have aimed for it by attacks upon others.

The French Revolution had been instrumental in sweeping the older France out of existence, and in making it impossible to maintain the ancient order of things elsewhere. What has taken place since that period has principally been the passing away of the Old and the developing of the New. In this category belongs the Art and Practice of Medicine. Its foremost teachers did not hesitate to talk like iconoclasts. "I am insensibly led," says Dr. Benjamin Rush, "to make an apology for the instability of the theories and practice of Physic. Those physicians generally become the most eminent in their profession who soonest emancipate themselves from the tyranny of the schools of physic." Again, he exclaims: "What mischiefs have we done, under the belief of false facts and false theories! We have assisted in multiplying diseases; we have done more, we have increased their mortality." More comprehensive and confirmatory was the assertion in *Lacon:* "Physicians have been tinkering the human constitution for about two thousand years to cure diseases; and the result of all their discoveries is, that brimstone and mercury are the only two specifics. Diseases remain what they were before."

One eminent practitioner, more explicit, affirms that, "After the practice of bloodletting was introduced by Sydenham, during the course of one hundred years, more died of the lancet alone than all who, in the same period, perished by war." A pretty severe arraignment of medical practice in the eighteenth century, and by no means unjust. "The unhappy patient is bled until reäction occurs," says

Dr. J. Mason Good; "there is no longer any rallying or reäctive power remaining, and he gives up the ghost in a few hours to the treatment of the disease." Mackintosh adds to this his testimony: "Many patients are over-purged with drastic medicines to the aggravation of disease, while others are bunged up with opium."

It cannot be denied that the practice of medicine, as it existed at the beginning of the century, was richly deserving of the sweeping denunciations which the leading practitioners so unqualifiedly bestowed. The theories had been changed, and continued to be changed, yet under them all, with little exception, the same reprehensible procedures were maintained as the regular orthodox system that might not be bettered, till the century had approached its noon. All this time it was insisted that they were scientific, and every deviation from them was stigmatized as quackery and empiricism.

Yet this pretension was set forth in all its hollowness by able writers. "The object of all science," says Dr. John Abercrombie, "is to ascertain the established relations of things, or the tending of certain events to be uniformly followed by other events." Dr. Gregory emphasizes this statement more forcibly: "The perfection of every science consists," he declares, "in the exact assignment of effects to their causes, and the expression of their operation in intelligible language." He applies his definition to the matter in hand: "Upon no subject have the wild spirit and eccentric disposition of the imagination been more widely displayed than in the history of medicine." Dr. Good adds his testimony: "The language of medicine is an unintelligible jargon."

If it was such when these declarations were written, what has it become now when the resources of the Greek Lexicon are taxed to their utmost to furnish names for the simplest and even the most familiar things? Apothecaries stand aghast, and often abandon in utter despair the attempt to compound prescriptions written in the technical dialect for coal-tar preparations. This practice may be regarded as a scientific necessity, but it is more probable that another motive lies behind it. "There is a language of priests," says Professor J. P. Lesley. "Every language of modern times is stamped with this priest-language all over the outside, is full of it inside, in its flesh and in the marrow of its bones." The priesthood originally created and constituted the medical profession; and now that religion has become divorced and disassociated from medicine, the effort is made to endow the legalized practitioner with the power, authority and exclusive sanctity which the clergy of the Sixteenth Century were endowed with. For this reason, perhaps, many countries of Europe prohibit the conferring of the medical degree, except the candidate shall have received the prescribed classical education. This condition not being required in the United States, affords a pretext for withholding recognition from American degrees. The alchemist of beforetime had his jargon, and medicine thus follows in its lead. We may yet see in our New World a general miming of the Old.

The next generation and century will probably have occasion to pass judgment as to whether those who now judge the masters of the former medical thought, are not therein condemning themselves by doing similar things. Animism, chemiatrics, spagiric medicine,

the solidistic and humoralistic pathologies, are now out of fashion, and are, therefore, convenient things to sneer at. But the crudities, the credulities, the absurdities current in the Nineteenth Century, and legitimated as scientific and orthodox, are little further removed from destructive criticism than their predecessors. "It is only in the dark circle of ignorance," says Sir H. Holland, "that knowledge is regarded as certain and complete." Sir William Hamilton adds: "Our little dream of knowledge is a little light surrounded by darkness." When the possessors of learning modestly seek to give it its true value, we are ready to render to it the due honor. But when sciolism, the partial knowing, is proclaimed dogmatically, and penal laws, as well as social proscription, are brought into requisition to enforce it as the supreme authority, it becomes a degenerate despotism, utterly repugnant to an enlightened civilization.

MODERN EMPIRIC, OR POSITIVE MEDICINE.

The Positive School of Medicine had its beginning in France, almost immediately after the Revolution. Bichat had laid the foundation upon which Broussais and Bouillaud erected their superstructure of "*Médecine Physiologique.*" The doctrines of Brown appear to have permeated it throughout. Broussais taught that the gastero-enteric region was the cause of fevers, and also of many other maladies now classed as nervous. His chief remedy was bloodletting, for which purpose he generally employed leeches. He was a professor at the hospital of Val-de-Grace, where it is reported that he made use of one hundred thousand leeches in a single year. He at first encountered fierce hostility from his brother physicians, but finally his views

were very generally accepted, and in 1831 he was appointed professor of pathology in the Academy of Medicine.

Corvisart introduced percussion and "physical diagnosis," and Laennec supplemented them by the invention of the stethoscope. He also devoted himself to the investigation of pathological anatomy, with immense success. Gaspard Laurent Bayle also prosecuted researches on tubercle and the other changes incident in consumption. The labors of these men combined to begin a new era in clinic medicine.

Another result was the overturning of the notions of Broussais. The credit of this achievement belongs to Louis, the author of the works justly celebrated on consumption and typhoid fever. M. Louis also introduced what is called the "Numerical and Statistical Method," which his eulogists commend as aiding to establish an exact science of medicine, and as removing the chief objections to regarding it as an inductive science. Gaverret systemized his methods, and Butonneau, Cruvilhier, Rayer, and the more distinguished Trousseau, were luminaries of the new Positive School of Paris.

ENGLAND.

In England, however, medical study, for a long time, was almost stationary. The theory of Erasmus Darwin, and the teachings of the Hunters, had more influence, and there was more attention paid to morbid anatomy. After the overthrow of the first Napoleon, English physicians began to learn and follow the methods of their French contemporaries. Sir John Forbes translated the works of Laennec and

Avenbrugger, and William Stokes, of Dublin, afterward published treatises on the use of the stethoscope. Hope and Latham investigated morbid anatomy, and were followed by Bright and Addison, whose discoveries in diseases of the kidneys rendered their names familiar to all.

Dr. Marshall Hall, distinguished for his researches on the nervous system, began his career by acquiring a thorough knowledge of the medical art, as taught at Edinburgh and on the Continent; after which he began practice at Nottingham. He speedily became popular, because of his superior skill in puerperal cases and his disuse of bloodletting.

Dr. John Hughes Bennett was an innovator, in sympathy to some extent with the School of Reformed Medicine in America. He took his degree at Edinburgh, and then went to Paris, in 1837, to study clinic medicine and the use of the microscope. He was one of the founders of the Medical Society of Paris, and became its first president. On his return to Scotland, he soon gained a high reputation as an independent thinker and teacher. In 1841 he received the appointment of Professor of the Institutes of Medicine at Edinburgh. He published several works, the principal of which, *Clinical Lectures* and a *Text-Book of Physiology*, went through several editions. He seems to have taken many exceptions to the current medical practice. At the meeting of the British Medical Association, in 1866, he procured the appointment of a committee to investigate the subject of mercury and other reputed cholagogues. The committee made many experiments and observations, and finally reported in 1869 that mercury did not increase the biliary secretion in any case, but actually diminished it

whenever purgation or impairment of the health had been induced. Dr. Bennett afterward made the following statement of his conclusions:

"I entirely agree with you as to the inutility or injurious character of mercury. As to antimony, I long supposed it to dissolve the excess of fibrine in the blood, but find I do just as well without it. The influence of arsenic is very doubtful. I never give it. Indeed, it may be questioned how any chemical element, which forms no part of the animal body, can be of the slightest service in curing or relieving the morbid conditions."

POSITIVE MEDICINE IN GERMANY.

It was at the "New Vienna School" that positive medicine had its principal centre in Germany. Its chief luminary was Karl Rokitansky, the celebrated writer on pathologic anatomy. The honor, however, of being the "regenerator of scientific medicine," is given by its disciples to Johann Lukas Schönlein. He was a professor, first at Wurzburg, then at Zurich, and finally for twenty years at Berlin. He succeeded in establishing in Germany the methods which were current in France and England; and so far as his influence went, they were adopted in place of the systems which had prevailed in his native country. His principal innovation, however, in which originality was involved, was the promulgation of the existence of a parasitic fungus in the disease called *favus*. In fact, he may be regarded as the originator of the various theories and researches pertaining to parasitic pathology.

The other countries of Europe may be passed over. The field is too large, and the laborers in it are too

many to permit the mentioning. Enough let it be, that those who made themselves and their opinions distinguished, above others their equals, and perhaps their superiors, are noticed. The historian is often compelled, even when the purpose is strictly impartial, to resort to such makeshifts. Besides, a mode of practice with which a writer is not in accord will be better described by those who have believed in its efficacy.

RESEARCHES IN PHYSIOLOGY.

All intelligent medical practice depends upon a proper understanding of physiology. The aim of philosophic theories and investigations of ancient periods was directed to this end. It was an exploring above nature into metaphysic, in order to ascertain what constituted nature. Students in the later centuries directed their inquiries to the various phases and phenomena of life as exhibited in organized structures, animal and vegetable. The humoral pathology taught by Galen, and accepted by his successors down to Stahl and Boerhaave, the solidism of Fernel, and the school of Hoffmann, were derived from such observations. Early writers taught that the brain, the heart, and the blood, were the seat of life and sensation. Harvey, following them, declared that only the blood possessed vital properties. Other researches, however, threw doubt upon this proposition, and drew attention to the entire nervous system. "Without a *nervous* system," an eminent writer affirms, "there is no animal—there can be none; without a circulating one, there are myriads."

Bichat, in his *Recherches Physiologiques*, extended the scope of this idea, setting forth that there are two

kinds of vital phenomena; and accordingly divided the nervous material of the body into two systems, calling one the nervous system of organic or vegetative life, and the other the nervous system of animal life. The former of these he referred to the epigastric region for its origin. Solly, taking his cue from the correspondence of its anatomic arrangement with that of the molluscous animals, designated it the "cyclo-ganglionic nervous system." He declares that, "although it is difficult, most probably on account of its minuteness, in many of the lower animals, to demonstrate the existence of the nervous system of vegetative life, as distinct from the animal life, there is no doubt that it always exists." (*On the Brain*, 1836.) Dr. Grant corroborates this opinion by the remark, that the nerves of sensation and motion closely accompany each other, forming by their union, cords or columns, or a *cerebro-spinal axis;* but that the sympathetic or *ganglionic* nerves form a more isolated system. To this system Anderson and others assign the cell-germs, which are the rudiments of organized beings. Every function purely physical, and essential to life, the animal warmth, the nutritive process, instinct, emotion, pertains to this system of organic life.

The physiology and constitution of the Brain were in like manner described by Franz Joseph Gall, of Vienna. His works upon the *Nervous System* passed through several editions, and were highly esteemed. In 1802, the government of Austria, at the instance of the clergy, forbade the teaching of his peculiar doctrine, as dangerous to religion; but going to France, he found numerous sympathizers among the ablest professors, such as Broussais, Andral and St. Hilaire. His disciples, Kaspar Spurzheim and George Combe,

further elaborated the new system, adopting for it the name of *Phrenology*, and it was accepted by Archbishop Whately, Elliottson, Macnish, and others of like prominence, and by Professor Caldwell, Dr. Nathan Allen, and others in the United States. As a recognized science, it has not been actually received by those who profess to be authoritative; it is still in the usual English process, first to be denied outright, and then to be accepted, withholding due credit from the discoverer. It is true, however, that Unzer and Prochaska had already set forth many of the essential features of the new science, and that Bonnet asserted that every portion of the brain has a distinct function of its own. Herbert Spencer also affirms the fundamental principle of phrenology very tersely:

"No physiologist can long resist the conviction," says he, "that different parts of the cerebrum subserve different kinds of mental action. Localization of function is the law of all organization whatever; separateness of duty is universally accompanied with separateness of structure, and it would be marvellous were an exception to exist in the cerebral hemispheres. Let it be granted that the cerebral hemispheres, are the seats of higher psychical activities; let it be granted that among these higher psychical activities there are distinctions of a kind which, though not definite, are yet practically recognizable, and it cannot be denied, without going in direct opposition to established physiological principles, that these more or less distinct kinds of psychical activity must be carried on in more or less distinct parts of the cerebral hemispheres."

Even J. Hughes Bennett, while discarding the peculiar localizations of the phrenologists, acknowledged the merit of the discoverers; declaring that "the

names of Gall, Spurzheim and Combe, ought ever to be registered among those whose labors have greatly contributed to advance our knowledge of the physiology of the brain."

The cerebellum, it may here be noted, is undoubtedly the organ for that function which has been unsuitably denominated "unconscious cerebration." It is untiring, incessant in its activity, never resting, but carries our thoughts silently to conclusions, matures actions into habits, and preserves the life while the functions of the brain are suspended, as in sleep.

Gall was the first to describe the spinal cord as an organism distinct from the brain, and to prove that it has a specific and independent office of its own, and is, therefore, not conditioned by consciousness or volition. Walker, following him, gave a description of the cord, its functions, qualities and peculiar conformation. After him came the men whose teachings are now controverted on one ground or another.

Sir Charles Bell has the credit of having originated the modern method of studying physiology. He began with a volume giving the anatomy of the nervous system and the organs of special sense. In 1804, he removed from Edinburgh to London, and there published his remarkable treatise on the *Anatomy of Expression.* It was designed to show how the influence of the mind was propagated to the muscular frame, and to explain the muscular movements which usually accompany the various emotions and passions. In 1807, followed his treatise on the *Anatomy of the Brain,* announcing the discovery of the different functions of the nerves, corresponding with their relations to different parts of the brain. He likewise explained

the peculiar arrangement of the spinal nerves, also set forth by Walker, that the anterior roots are motor, and the posterior roots sensory. He was vividly conscious of the importance of his discoveries, and in his exultation wrote to a friend : "I really think that this new *Anatomy of the Brain* will strike more than the discovery [by John Hunter] of the lymphatics being absorbents."

His expectations were abundantly verified, and the result was a complete overturning of the current opinions. For years the notion was entertained, that everything of the character of a nervous system in the lower races of animals belonged to the cerebro-spinal axis, or some structure corresponding to it.

Dr. Marshall Hall, having removed to London, continued to employ himself in physiological investigations. His studies of the pernicious effects of blood-letting were of vital importance to patients. In 1829, he made his grand discovery of the capillary circulation, thus completing the theory of William Harvey. He published the account of it in his *Critical and Experimental Essay*, showing that the minute blood-vessels between the arteries and veins serve to bring the blood into contact with the various tissues of the body.

The achievement, however, for which he was most distinguished, was his discovery of the reflex functions of the nervous system. His monograph on the *Reflex Function of the Medulla Oblongata and the Medulla Spinalis*, in 1832, excited great attention on the continent of Europe, particularly in Holland and Germany ; and M. Flourens described it as "a great epoch in physiology." From that time Nervous Diseases constituted a department in pathology and nosology,

and Doctor Hall became the highest acknowledged authority upon the various derangements of health resulting from abnormal conditions of the nervous system.

In 1837, he published another work entitled: "*On the True Spinal Marrow and the Excito-Motor System of Nerves.*" It was an endeavor at the classification and explanation of the distribution of the entire cerebro-spinal nervous system. He adopted the doctrine which had been propounded by Gall, that the spinal cord is an organic structure distinct from the brain, endowed with a specific vitality, and having its appropriate functions. These he denominated "excito-motory," and he attributed to them likewise the phenomena of reflex action. He supposed that there existed an additional set of nervous fibres, *incident* and *reflex*, by which the diastaltic functions were performed. This he believed to be demonstrated by beheading a frog and removing its viscera.

"I beg leave to repeat," says he, "the cerebrum, the centre of the spinal cord of nerves, and all the ganglionic system, have been removed from this animal; and yet when I pinch the extremity, it moves so as to be obviously perceptible at the remotest part of this theatre. You observe something remains. That which remains I venture to call the *true spinal marrow*."

Dr. Hall treats of the several operations of the nutritive functions, and also the uterine function, as excito-motor. Other experiments and observations have since disproved this theory, and now the phenomena of reflex action are ascribed to the ganglionic nervous system. The text-books generally, however, are comparatively meagre in regard to this department. While the cerebro-spinal system and the

nerves of sensation are diligently explained in all their minute particulars, the ganglionic system, which underlies all that can be known of vital function, is, in a great measure, overlooked and neglected.

The Nineteenth Century has been distinguished by large contributions to Embryology. The works of the great founder of this science, Kaspar Friedrich Wolff, which had been discredited for sixty years through the influence of Haller, were now translated, and their teachings followed up by such investigators as Oken, Meckel, Tiedemann, Panda ; and after them, by Von Baer, now regarded as the greatest among modern embryologists.

The theory of cell-development, to the exclusion of other hypotheses, was zealously promulgated by leading histologists, and had the support of the various schools. All physical organization was imputed to the cells, and its beginning traced back to the original cell or cell-substance of the ovum. Virchow, the great champion of the dogma, asserted that "the cell is really the ultimate morphological element in which there is any manifestation of life, and that we must not transfer the seat of any real activity to any point behind the cell." *

To this hypothesis, Dr. J. Hughes Bennett opposed a bold denial, and affirmed that the basis of the organism and the seat of vital activity, was the elementary molecule. He sustained his position by the history of the embryo, and the process of nutrition in the glands and nerve-ganglia, and in all alterations of texture. He also remarked that histologists had been unsuc-

* This doctrine became current about the middle of the century. The first lecture delivered on physiology by the writer was devoted to an explanation of the cell-theory, which was then a novel one to physicians as well as students.

cessful in their attempt to trace all tissues back to cells, and accordingly had universally acknowledged that cells themselves must originate in the first instance from a formless or molecular fluid, which Schwann has denominated *blastema*. Even Virchow admitted the existence of ultimate granules; and other upholders of the cell-theory confess that the potential part of the cell is not the wall or the nucleus, but the contents or protoplasm.

"The molecular theory of organization," says Bennett, "must ultimately constitute the basis for the arts of horticulture, agriculture and medicine."

SURGERY AND SURGICAL PATHOLOGY.

It is a peculiarity of modern professional study, that a greater desire is manifested for instruction in surgery than practical medicine and the kindred departments of knowledge. The labors of John Hunter, Blumenbach, Dupuytren, and their contemporaries, have been sedulously followed up all over the civilized world. The clinic teaching, as exemplified by Syme and Lawrence, resulted in a wide diffusion of surgical knowledge through all ranks of the medical profession. The methods of procedure have been largely changed; anæsthesia, hygienic appliances, and a host of new devices have been added. Dr. Charles Creighton enumerates among these the following, as the more important, namely: the thin-thread ligature for arteries, the revival of torsion for arteries, the practice of drainage, aspiration, the plaster-of-Paris application, the re-breaking of badly-set fractures, galvano-caustics and ecraseurs, the general introduction of re-section of joints, tenetomy, operation for squint, successful ligature of the external iliac artery for aneurism of

the femoral, ligature of the subclavian, crushing of stone in the bladder, removing of the cyst in ovarian dropsy, the discovery of the ophthalmoscope, the application of the laryngoscope, and various additions to the resources of aural surgery and dentistry.

Perhaps, in the coming century, the anticipation of enthusiastic individuals will be realized, that there will be no incurable diseases. Then much of the necessity for harsh and violent remedial procedures would be obviated. The maiming and mutilating of the human body is repugnant to our instincts, and seems almost like forms of sacrilege. In present conditions, however, we must do the best that we know. It is very certain that there is often an undue eagerness of surgeons to perform unnecessary, and even dangerous operations. Nevertheless, the life of President Garfield might probably have been saved if a courageous and skillful surgeon had ventured to make an exploratory incision into the abdomen, as Dr. J. Marion Sims suggested. We may also repeat the statement so confidently made, that at the present time, but nine per cent. of all operations in amputation have a fatal termination. It is to be supposed, that those cases are not included, which are reported as successful, and the patients die afterward in consequence of the procedure. When useless and unnecessary operations shall no longer be performed, the results will be much more gratifying.

In Surgical Pathology, there has been a steady advance. With the better methods of living, and the various social improvements, epidemics are less destructive, and the rate of longevity heightened. Surgical diseases are more amenable to treatment and far less mortal. The knowledge possessed, and the

improvements actually made, are of far greater value, in a scientific as well as humanitarian view, than those of any antecedent period.

ARTIFICIAL ANÆSTHESIA.

The general introduction of anæsthesia as an auxiliary in surgical operations, has been generally welcomed by both patient and operator. It takes rank among the memorable discoveries of the century. It is very certain, however, that neither the conception nor the art itself is of recent date. Much had been already achieved by the peculiar catalepsis of mesmerism, and hopes were confidently entertained that satisfactory results would be produced, when etherization was brought into practice. This is speedier in producing the desired insensibility, but, at the same time, it is infinitely more hazardous. The greater certainty, however, has enabled it to supersede its worthier rival.

The concept of deadening pain by artificial means is very ancient. Herodotus, Pliny and Dioskorides mention drugs that were employed for the purpose. Mandragora was used by Italian physicians. The Skyths of olden time inhaled the vapor of hemp to produce intoxication, and we have read of a Chinese physician who anæsthetized his patients with a preparation of Cannabis, in order to obviate the pains of surgical operations. The Brahmans understood the art, and employed it at *satis* to protect the widow from feeling the flame when on the funeral pyre. It has also been affirmed, that physicians of the Middle Ages, who were proficient alchemists, were skillful in the producing of insensibility by artificial means, and that many of the marvellous exhibitions of uncon-

sciousness to pain were the effect of drugs and vapors. It is certain, however, that mental exaltation, from whatever cause, will have a similar result. Soldiers in the fury of the battle, often scarcely feel the deadly wounds inflicted upon them; and the accounts of the religious martyrs in the hideous torture-chambers of the Dark Ages, and even of the victims burning alive at the stake, would suggest that rapture had suppressed the sense of physical pain. We know that with the approach of death, the patient is rendered oblivious of suffering; and it has even been affirmed, that the art had been taught of holding the breath and employing other means by which to suspend pain, or at least to procure its mitigation. The *Convulsionnaires* and other enthusiasts used to exhibit conditions of anæsthesia which we know little about, and which some profess to consider it a proof of superior intelligence to discredit and deny. The famous Witch Trials brought out testimony, which seems to be indisputable demonstration of the possession of such an art. To a reflective mind, unbiased by prejudice or preconceived notions, the evidence must appear as proof of a knowledge which may have been since forgotten, although in scientific circles so-called, it be unknown and ignored. We may apply to the latter the words of Humboldt: "A presumptuous skepticism that rejects facts without examination of their truth, is, in some respects, more injurious than unsuspecting credulity."

Sir Humphrey Davy appears to have been the first to comprehend the feasibility of employing anæsthesia for surgical purposes. He discovered that the nitrogenic protoxide would, with comparative safety, remove the sense of pain, and to a great degree set the

mental faculties free from the bodily investiture. "It may be used with advantage," he confidently declared, "in surgical operations in which no effusion of blood takes place." His great pupil and successor, Michael Faraday, perceived similar effects from the inhaling of sulphuric ether; and several American physicians demonstrated this by experiment. Yet the suggestion remained unheeded till the century had approached its meridian. Then, as though the idea was floating hither and thither in the mental atmosphere, so that those awake to such things might simultaneously become cognizant of it, Dr. Crawford W. Long, of Georgia, Horace Wells, of Hartford, and William T. G. Morton, of Boston, the latter two being dentists, ventured to employ it in their practice. Wells used the nitrous oxide and Morton sulphuric ether. So great was Morton's success that he employed it in the hospital where a patient was to undergo removal of the jaw. The credit of the discovery was finally conceded to him, but not till after much opposition and legal conflicts. These induced him to abandon his profession, and shortened his life. Abroad the discovery met with more speedy appreciation. Robert Lister, the eminent British surgeon, as soon as he had learned of it, proceeded to employ it, and the practice soon became general in Great Britain and on the Continent. Since that time, in the reversal of professional sentiment, the physicians of Boston have erected a monument to Morton, and in Georgia a tablet has been set up in honor of Dr. Long.

Sir James Y. Simpson, of Edinburgh, was the first to employ anæsthesia in midwifery, and he had the gratification of annulling the fearful suffering. He

was obliged, however, to encounter hostility from the Scotch clergy, who charged him with atheism and irreligion. He was setting aside the Divine ordinance, they declared: "In sorrow shalt thou bring forth children." The next year, 1847, Simpson learned of the efficacy of chloroform and substituted it for ether. From that time the employment of anæsthetics has been regarded as an essential feature in surgical practice.

GYNÆCOLOGY.

The medical and surgical diseases of women have constituted a prolific field for investigation and experiment, and it has been assiduously cultivated. True, that Nature, in her mysterious operations, has always been partial to the female sex in all races of living beings, and has granted to woman a greater longevity, as a general rule, than she permits to less favored man. Nevertheless, as the world now moves, the various ailments peculiar to women make up the larger part of the physician's employment. We leave it to the educator and pathologist to explain whether this fact is an incident of their physical organization, an unavoidable concomitant of the abnormality of our modern civilization, the result of unwholesome personal habits and social customs, or a whim engendered by improper training, which has made ill health fashionable and a thing to be enjoyed. Certain it is that the condition is very general, especially in this country. Medical teachers and writers have accordingly differentiated these complaints, and set apart a special sub-division of medical and surgical practice, giving it the somewhat incongruous designation of *gynæcology*. Properly, the term relates to female human beings as a whole, their traits and peculiarities; in

this connection, it indicates little besides their diseases and surgical treatment.

The obstetric art, which unquestionably pertains to this department, was universally regarded from earliest history as the province of women only. The records in the Bible, the inscriptions and other monumental evidence obtained by archæologists, the literature which has been preserved from ancient periods, are conclusive in this matter. The midwife was a woman who was everywhere held in honor. "They feared God," says the author of the book of *Exodus*, "and He caused their households to prosper." The philosopher, Sokrates, narrates, with complacency, that he was the son of a midwife, and makes her art an illustration of his method of teaching. Pliny speaks of women who were physicians as being of the nobility, one of them bearing the title of "*iatromea** *regionis suæ prima*"—the noblest female physician of her district. The Arabians, through the Middle Ages, left the obstetric art with the female sex. The employing of men for this office is one of the modern innovations. The "wise woman" has been supplanted in this and many other countries. This fact is coincident with the development of the art of gynæcology.

The diseases of women, however, were under no such restriction. Hippokrates, Galen, and Aretæos, discoursed of metritis, induration, displacements, menstrual irregularities, leucorrhœa, ulcerations of the womb, etc., and Aëtios mentioned the speculum,

* A female physician. From ἰατρός, a physician, and μαιᾶ, a midwife, or nurse. The *iatromeæ* of Rome and Italy were Greeks, and because of their skill they had been permitted to remain when the Romans expelled their countrymen from the peninsula. The Romans left the arts and professions generally to people of the subject nations.

sponge tent, sound, caustics for ulcers, dilatation of the cervix uteri, injections, hip-baths and other appliances. Indeed, the remark of Aristotle was abundantly warranted in this matter, as well as generally, that "probably all art and all knowledge have been often fully explored and again forgotten."

M. Recamier is generally regarded as the founder of the modern school of gynæcology. He is credited with having discovered the speculum in 1801, but this is a mistake. Both Astruc and Ambroise Paré were acquainted with the instrument. Recamier, however, was the first in making much use of it in his practice. He also employed a curette. But it was a long while before English practitioners overcame their prejudice against these appliances. Sir James Y. Simpson, of Edinburgh, was the earliest physician of note among them to occupy this field of investigation. He wrote extensively upon uterine pathology, describing pelvic cellulitis, hæmatocele, fluxions, etc., and recommended the sound, sponge tent, and other means of diagnosis. Before him there had only French writers given attention to these subjects, but now the professional interest in them became general.

Dr. J. Hughes Bennett, himself a student in the hospitals of Paris, and deeply imbued with the sentiments of Recamier and Lisfranc, also took part in the same labors. He published his work on the *Inflammation of the Uterus*, in 1845, and was able afterward by his intense zeal and energy to arouse the attention of medical men, not only in Great Britain, but on the continent of Europe, and in America. Many of his statements were disputed by contemporary writers like West and Tyler Smith, but the importance of his labors cannot be denied. His general theory described

inflammation as the starting-point in uterine affections, of which menstrual troubles and leucorrhœa were merely symptoms; the inflammation being confined, in most cases, to the cervical canal. Dr. Smith insisted with Lisfranc that, as a result of the inflammation, the parenchyma was engorged.

M. Velpeau was the next author of distinction in this department, and his theory of displacements as being the cause of most uterine affections, was accepted by the leading physicians of Paris. As a result, there was a general inventing and applying of pessaries. The professional sentiment, however, has since been changed, and the belief is now commonly entertained that displacement is the effect rather than the cause of inflammation.

Dr. James Marion Sims, a physician of Montgomery, Alabama, made his name memorable for his new inventions and procedures. Coming to New York in 1853, he endeavored to bring to the attention of his professional brethren what he had accomplished in operative surgery for lacerations and other injuries of the female organism. The umpires of professional opinion, to whom he communicated his discoveries, received him coldly. From Nazareth or a Nazorean would nothing good be recognized. Those who derived information from Francis, Mott and Stevens, followed their example. Sims then turned to others whom they were superciliously ignoring.* Dr. Elijah Whitney, a graduate of Union College, with "certain

*Dr. Sims long remembered these his first friends in New York, for their services so vital to his success. He responded afterward, by a declaration against the Code of Medical Ethics, from which he and they alike were sufferers. When he became President of the American Medical Association, at the time of the Centennial Exhibition in 1876, he took occasion in his address to pronounce against it as effete and moribund, and advised to "let it die."

honorable women," and a few others, reached out to him the fraternal hand, and opened the way for him to make his discoveries known to the public, and to those who had need of them. In this way he was enabled to open the Women's Hospital of the City of New York. He and his fellow-laborers thus introduced a new era into that department of surgery. What Recamier began and Simpson improved, James Marion Sims brought to greater perfection. While, however, his procedures were adopted by those who had before scouted them, he himself encountered some of the usual experiences of apostles and innovators. He was supplanted and superseded by those who had followed in his footsteps, and were thereby able to secure for themselves many of his honors.

EXTIRPATION OF THE OVARIES.

Another of the modern additions to operative gynæcological surgery is the extirpation of the ovaries. It has become an operation of frequent occurrence, and is employed for tumor, dropsy, and even painful menstruation. It seems to have been adopted, like other procedures, from the laity. The unsexing of female domestic animals has been for hundreds of years a common practice in many agricultural districts. The spaying of swine was performed by the herdsmen of ancient Greece, as well as by the moderns; and milch cows were sometimes castrated in order that the period of lactation might be extended for an indefinite period uninterrupted. The Lydians unsexed young women for the purpose of ministering to the sensual tastes of the wealthy and powerful. Later in the ages, we have the account of a swineherder in Hungary who, in a rage at the lasciviousness

of his daughter, compelled her to undergo the operation.

Nobody, however, seems to have dreamed of it as a remedial measure till the eighteenth century. Several prominent surgeons then began to discuss the subject —Schlenker in 1722, Willius in 1731, Peyer in 1751, Targioni in 1752, and Delaporte, who, in 1758, formally proposed the operation to the Royal Academy of Surgery of Paris. Laumanier, of Rouen, by accident, having made a mistake in diagnosis, actually removed a diseased ovary in 1781.

In England, likewise, the proposition was urged with great energy. John Hunter advocated it with his customary boldness, and Dr. Percival Pott ventured to perform the operation in a case of inguinal hernia.

D'Escher, a student at the University of Montpellier, read a thesis in 1808, setting forth a specific method for the excision.

So far, however, it was but preliminary discussion. Public sentiment, as well as natural instinct, was averse to such an act of mutilation, and surgeons had not boldness or assurance to venture upon its performance. Indeed, the penalties for mayhem and malpractice, so often invoked and so inexorably enforced, were enough to deter every one but the most resolute.

Finally, however, American surgeons proved sufficiently temeritous. Dr. Ephraim McDowell, of Danville, in the State of Kentucky, ventured upon the operation in 1809. The result was satisfactory, and the patient lived till 1834. He afterward operated thirteen times, eight of the patients surviving. The next American to undertake the removing of the

ovaries was Dr. Nathan Smith, of New Haven, meeting with like success.

Dr. Walter Burnham, of Lowell, in the State of Massachusetts, and Professor of Surgery and Operative Midwifery in the Worcester Medical Institution, became distinguished for his skill and wonderful success in this department of surgical practice. He was a man of rare ability, remarkable for presence of mind, deftness and sagacity ; and as a surgeon he had few equals in America. As early as 1823, when still a youth, he had heard Dr. Smith describe the operation to his father ; and after he had himself graduated in medicine, while a practitioner in Northern Vermont, he made a careful study of ovarian tumors as he observed them in necropsies.

At that time, no adequate description of these affections had been given, and Dr. Burnham was obliged to work out the various problems for himself. He found a patient in 1839, and made the necessary arrangements for operating, but she died the night before the time appointed. His first actual attempt was made in 1851, at Branford, Connecticut, with gratifying results. A few months later he operated upon a patient at Meriden, removing a tumor weighing fifty-four pounds. The patient, however, was greatly debilitated, and died from peritonitis a few days afterward.

At this period it was an undetermined question among medical men whether the extirpation of ovarian tumors was ever a justifiable procedure. Dr. Burnham was severely criticized on every hand for his venturesome course. A leading journal denounced the procedure as "barbarity under the name of science." Bitter hostility followed him for many

years. Twice he was threatened with prosecution for manslaughter, but the recovery of the patients defeated the malignant purpose of his enemies. He was once actually arrested in Canada for having performed the operation, but was speedily set free from custody. A professor of surgery in one of the medical colleges of the city of New York, in 1875, declared his regret for Dr. Burnham's success, as he considered the procedure unjustifiable; and he boldly affirmed, in a lecture to his class, that not one such operation in a hundred could possibly be successful, and the patient recover.

Walter Burnham attained his celebrity by his skill and the good fortune which attended him. He was a lover of his kind, upright and conscientious, and in no way fool-hardy, vain or conceited. He made no boast of what he accomplished, nor was he ever eager to perform an operation. He acted from conviction, believing that every case of the kind was certain otherwise to go on sooner or later to a fatal termination, and assured from actual experience that the procedure was far less dangerous than had been apprehended. At the same time, however, he declared it to be one of the most dangerous operations which a surgeon is called upon to perform.

It should be borne in mind that Dr. Burnham had few of the facilities enjoyed by the distinguished surgeons of later years, and he was obliged to leave his patients to the care of other practitioners, and such nurses as were at hand. So bitter was the professional feeling, that physicians of the dominant school refused to take charge when he had performed an operation. He finally yielded, for the sake of his patients, severing his connection with his former

associates and affiliating with the other party. His death took place in 1883, in his seventy-sixth year. In the course of thirty years Dr. Burnham performed the complete extirpation of the ovary 281 times, having 51 fatal cases. Several of these were from incidental causes, for which he could not be regarded as in any way to blame.

Dr. Lizars introduced the procedure into Scotland in 1823, with the most unfortunate results. Dr. Charles Clay afterward urged it upon the attention of surgeons in England to such acceptance that men like Lane, Wells and Tait took it up and became famous for their skill and the multitude of their operations. They lost only about one in three of their patients. This seems to be about the general rule.

In Germany, however, the fatality from ovarian section was truly excessive. Simon reported that out of sixty-one cases only twelve completely recovered; and Scanzoni speaks of the operation as "a procedure by which Langenbeck has lost five out of six, and Kirwisch four out of five."

Since that period, nevertheless, it has attained extraordinary favor in certain professional circles, especially in America. The patients may be numbered by hecatombs. With the sanction of the great names enrolled in its advocacy, any one who should protest, or even question the propriety of operating in trivial or curable cases, would be virtually crushed into silence. He would need very deep conviction and heroic courage for the attempt. The fearful humiliation which is inflicted, as well as the attending mortality, seems hardly to be taken into the account, and the procedure is so common as to constitute one of the favorite operations of the Nineteenth Century.

Occasionally, however, there has been a word of emphatic dissent, even in high places. Dr. Abraham Jacobi, of New York, describing the many ways of becoming or appointing professors nowadays in medical colleges, suggests, with exquisite irony, the following as sure :

"Write a text-book while you are young.
"Operate on two alleged lacerations daily, and let no more than fifty per cent. die of septicæmia.
"Prove that the best place for ovaries is in a jar."

A physician of Michigan, when at a post-graduate dinner in New York, was more forcible in his utterances. "I would as soon keep a powder house in the region of everlasting fire," said he, "as be a woman with ovaries in the city of New York."

Some time, perhaps, when a higher conscientiousness pervades the medical profession, and there prevails an enlightened and reformed public sentiment, there may dawn a better day.

HYSTERECTOMY.

Walter Burnham was the first surgeon of modern time who ventured upon the excision of the womb. It was upon the occasion of his fourth operation for ovarian disease, and took place on the 26th of June, 1854. He had found, upon opening the abdomen of the patient, that instead of an enlarged ovary as he had supposed, there was an interstitial fibroid attached to the fundus, and involving the uterus itself. The left ovary was enlarged, and there was a cyst adhering to the other, which contained a dark sero-albuminous fluid. With characteristic promptness, Dr. Burnham decided to remove the entire organ, with its appendages, clear to the cervix. The recovery was very tedious, but at

the end of five weeks the wound had closed, all morbid discharges ceased, and the general health was good.* In his account of this operation he adds the following statement of his own position:

"Although this case terminated favorably, I would not easily be induced to make another attempt to extirpate the uterus and ovaries, or even to remove the uterus, under almost any condition; and the operation should never be attempted without due consideration of the consequences of submitting the patient to such formidable risk."

This extraordinary operation, with the wonderful recovery, was announced to the entire medical profession in the various publications, as opening a new field for gynæcologic surgery. The illustrious operator was lauded everywhere for his successful achievement, and his name was in a fair way to become as famous in professional circles as that of Hunter, Paré, or Desault. It transpired, however, that he presided at meetings of physicians of the Reformed School, and had actually been elected President of the National Eclectic Medical Association, at its annual session at Worcester, in 1854. Then all was changed, and his skill and success were consigned to a significant silence. His patients were made to suffer; it was unethical to take charge of them, and they were liable to be left to linger, and even to die, uncared for. Such was the bigoted partisanship of the members of a profession claiming to be scientific, in a country boasting of liberal institutions and an advanced Christian civilization. Under this con-

* This patient was thirty-eight years old, and was living in 1884, thirty years after the operation. The morbid discharges which Professor Burnham describes corroded the skin wherever they came in contact with it, and their malignant quality was only ameliorated by lotions of chlorinated soda.

dition of things, Professor Burnham became again a member of the Massachusetts Medical Society.

An account of his operations was read at the meeting of the American Medical Association in 1878, and afterward published in the *Transactions*. He had performed the new operation fifteen times in all, three of the patients recovering. The cases were generally those with fibroid tumors; the patient being in low health, without energy to rally from the shock, and sometimes not receiving proper care. Under more favorable conditions, there would doubtless have been more fortunate results. But the truth undoubtedly is, as Abernethy declared, that it is owing to our ignorance that there is any necessity for instruments to cure diseases; and we are, therefore, warranted in the hope and expectation that remedial measures adequate to the exigency may yet become known.

THE "NATURAL BONE-SETTERS."

During the war of the American Revolution, Job Sweet, of Rhode Island, became widely known for his expertness in reducing fractures and dislocations. The French commander at Newport, General Rochambeau, repeatedly had his services in requisition for operations which the army surgeons were unable to perform. Colonel Aaron Burr, several years afterward, employed him to replace the dislocated hip-bone of his daughter, after other surgeons had not succeeded. This peculiar knack or faculty appears to have been possessed by others of the family; Sweet's father and grandfather having been so distinguished, and their descendants still exercising the art. It is not easy to suppose it a natural gift or inheritance, and yet some facts connected with the

matter seem to imply as much. The various members of the family are generally without a liberal education and belong in the humbler walks of life. Even when very young, they have reduced dislocations with admirable deftness, broken bones anew which had not been properly set at first, and performed kindred operations.

Old Job Sweet was accompanied one day by a prominent physician of Boston to visit the anatomical museum. As he passed by a mounted skeleton he suddenly stopped, and with the remark that he had never seen one before, he pointed to a small bone in the foot, which he declared to be wrong side up. This was disputed, but when he had changed its position, it was conceded that he was correct.

A son of his was operating one day upon the fractured femur of a patient. A spectator, knowing him to be uneducated, asked him how he was able to replace the bones so exactly. He replied that he did not know, but that he was just as certain of the position of the bones when he operated, as though he saw them with the naked eye. William Sweet, a grandson, equally celebrated, made the following quaint explanation: "I see the bone that I am going to set just as plainly as if it had no flesh upon it. I say that 'I see it,' but of course I do not *see* it." He evidently implied a mode of perception that made the matter plain to him, but which he had no command of words adequate to describe.

Similar accounts are given of Dr. Kittredge, of New Hampshire. His manners and methods appear to have been very similar to those of the Sweets; he was equally famous in the community, untaught, but possessed of great penetration and sagacity.

Among wonderful operations by members of this family was one more remarkable than the others. The late Joseph P. Hazard, of Peacedale, had displaced the semilunar cartilage, and on applying to several eminent surgeons of Newport and Providence, was informed by them all that its restoration was beyond the surgical art. John Sweet, a country farmer, was next called, and in a few minutes accomplished the task. These testimonies may be multiplied. The wife of William Lloyd Garrison, the famous abolitionist, was a patient of one of the family, and he published a glowing description of the matter.

Members of the family at Fall River, New Bedford, Hartford, and elsewhere, besides the Narragansett homestead, still practice the art. It is said, however, that Dr. Reid, a physician of Rochester, in the State of New York, some years ago, obtained a knowledge of the procedure and announced it to the profession as original with himself. In any light that we view the subject, whether this art was in some sense intuitive, or whether it has been transmitted as an heirloom from generation to generation through centuries, it is remarkable.

TREATMENT OF THE INSANE.

Perhaps there is no better criterion of the civilization and moral advancement of a people than is afforded by the treatment bestowed upon the insane. In the Dark Ages they were virtually outside the protection of the law, and were abused worse than the beasts. Till recently, and even now in some commonwealths, the legislation and jurisprudence are little improved. The insane person is held unable to transact business, but is often hanged for capital crime.

The facility is almost unbounded in many states of the American Union to deprive individuals of their liberty as by a *lettre de cachet*, wrongfully as well as rightfully, and to follow up the measure by a sequestering of their property. There is an unrecorded history of such matters, extending even to the present period, which, if it should be disclosed, would excite the popular indignation beyond bounds.

Slowly, as if reluctantly, has progress been made in the care and curative treatment of persons suffering from mental alienism. In this country, and in Europe, the practice has been to place the most hopeless and difficult of managing in the houses provided for paupers, or in bedlams, and even to incarcerate them in prisons. The neglect and ill-treatment which they received, were often little short of atrocious. Individuals wrongfully confined, and patients but mildly deranged were rendered hopelessly insane. In the general deficiency of psychic knowledge, and of nervous and other disorders which directly effect a disturbance of the mental condition, a license was permitted to keepers and attendants not greatly unlike that allowed to the guards at a convict prison.

During the present century there have been many attempts at amelioration. Many of the improvements, however, have been more in form, than radical. It is still too easy to procure incarceration on a trumped-up charge of mental incompetency, and too difficult to extricate a sane person once in the toils from the power of his enemies. There is, however, great improvement in European legislation. In England, no lunatic may be received in an asylum for profit or detained, except on proper evidence and on the personal responsibility of the individual ordering the deten-

tion. Full opportunity is given to procure expert examinations and discharge under proper conditions, from custody. In the continental countries, every evidence offered is reviewed by an expert, before the case is decided by the court having jurisdiction.

To Philippe Pinel and William Tuke must be ascribed the awakening of public attention to this matter. They had conceived the idea of setting insane patients free from arbitrary restraint, believing that an appeal to their moral nature would be followed by somewhat of success to resist and even to overcome abnormal influences. Both tried the experiment, the former at the Bicètre in Paris, and the latter at the York Retreat in England. It took long to procure any general adoption of this principle; but it has generally been very successful in the way of relieving the condition of those hopelessly insane, and enabling others to recover their health and return to human society. Those who reluctantly assented to the overwhelming evidence, resorted to the makeshift argument that the type of insanity had changed in the Nineteenth Century, whereas it was only the type of treatment that had altered.

Various experimental plans have been adopted in France and Belgium, looking to the restoring of patients to normal condition by proper treatment, wholesome employment, and the arousing of the moral sensibility to proper activity. In Great Britain the same general line of procedure has been adopted, and as a result the violent forms of madness formerly the theme of romantic stories, have almost disappeared. Whenever in this country or elsewhere the prisons and poor-houses have been exchanged for more comfortable abodes, the benefits and improvement have

been most marked. As neurologic and psychologic knowledge shall be better understood, and the pathology of this class of disorders is rationally and practically studied, there will arise philanthropic persons equipped for their work, skillful both in medicine and in the applying of moral and mental discipline, energic to "heal the sick and cast out devils," if not to raise the dead outright. Much of a cheering character has been accomplished in many places, and due credit should be given to those who have brought it about; but there remains infinitely more to be accomplished in other fields, and of an aspect far from encouraging.

HOMŒOPATHY AND ITS PROGRESS.

During the Nineteenth Century Homœopathy has made very encouraging progress among the more intelligent classes of society. From being scoffed and derided as a visionary practice, "the quackery of the drawing-room," as distinguished from the Botanic practice affected by the "plain people," it has become recognized in scientific circles as possessing actual value. True, it has been nowhere inaugurated like its great rival, with the rank and official standing of a National Established Church of Medicine; and it is not able, therefore, to work hand in glove in any country with the State Religion, so that it may, by harsh and vindictive measures, strive to weed out dissent. Those accordingly, who regard such authority as indicating the true standard, and its exercise as proper and professional, will continue still to regard Homœopathy as not successful. It little matters with such persons whether that which is uppermost be intrinsically right or wrong.

A deputation of English Non-Conformists once

waited on Lord Chancellor Thurlow to propound their grievances and asked to be favored like the Established Church. After hearing them a little while he cut them off with these words: "Gentlemen, I am against you. I am an upholder of the Established Church. Not that I care at all for the Established Church; but I uphold it because it is the *Established* Church. Get your damned sect established in its place and then I will uphold *that*."

Although Homœopathy has been proscribed and prohibited by the Civil Power in countries of Europe, and excluded from fraternal recognition by the self-constituted umpires of medical sentiment, because its practitioners do not conform to the Established Dogma of Regularity, they may derive comfort and assurance from the observation made by Mr. Herbert Spencer, that the effect produced by arbitrary measures usually turns out to be exactly opposite to what was intended.

It is not so very long since there were penal laws in many of the American States, making the practice of medicine outside the prescribed line, a misdemeanor, punishable by fine and imprisonment. Persecutions followed that were not unworthy of an Alva or a De Montfort. Then was made an appeal to the people, and with the dissemination of liberal opinions the obnoxious statutes were everywhere abrogated. The circle of movement has been again described, and the former experience is repeated. Canada and England set the example for Americans. But Reformed Medicine, Homœopathy, and other advanced movements have obtained a foothold in the Western Hemisphere from which they cannot be dislodged, except their own supporters abandon the field.

The first physician who introduced Homœopathy

into the United States was Dr. Johannis B. Gram. He began in the city of Boston, in 1825, but received little notice or favor except from the German population.

In 1835, Dr. Detwiler established at Allentown, in the State of Pennsylvania, a seminary for the instruction of medical students, by the modest title of the "North-American Academy of Homœopathic Medicine." About this time there was a general ferment in the medical world, and public sentiment in the United States was setting in favor of liberty and liberality in the practice of medicine. The new institution was successful in attracting attention, but received only a moderate support. It was in no sense American, and its instructions were given in the German language.

Dr. Constantine Hering was a participant in the enterprise, and resolved to extend its operations. Removing some years afterward to Philadelphia, he procured from the Legislature in 1848, an act of incorporation for the "Homœopathic Medical College of Pennsylvania." This institution was well under headway, when it encountered an obstacle common in the history of medical institutions, ambition for mastery, and dissensions among the patrons and instructors. In 1867 a division took place and the "Hahnemann Medical College" was organized. Better sense, however, came to the rescue, and in 1869, the rival institutions were merged together under the charter of the former, but adopted the name of the latter. The Hahnemann Medical College is now the parent school of Homœopathic Medicine for both hemispheres, and in its appointments and facilities it ranks fairly with the first medical colleges of America.

The Legislature of Michigan having created a State University at Ann Arbor, a department of Medicine was established in it by the Board of Regents. In this were taught the doctrines of the Old School in the form that existed at that period of the Nineteenth Century. The Homœopathic physicians of the State next contended for professorships of Homœopathy. It was bitterly opposed, but vigorous effort and earnest appeals to the sense of justice, both of members of the Legislature and their constituents, effected the object. Much chagrin and rancor were exhibited for years at this proceeding, but the step was never retraced. The example has since been followed in the universities of Iowa and Minnesota.

The other Homœopathic colleges are at Cleveland, Chicago, St. Louis, New York, Boston, Detroit, Cincinnati and San Francisco. One of the two in New York is solely for the instruction of women. Most of the colleges, however, are open alike to students of each sex. They are generally prosperous, and from year to year are becoming more so. Like most colleges in America they are private corporations.

The Homœopathists of America are very compactly organized, and cherish a warm *esprit de corps*. Their National Institute has about two thousand members, and they have societies in excellent working order in thirty-two of the states, besides smaller associations in the principal cities and districts of the country. They have also an extensive literature, and all the necessary facilities for occupying a broader field.

HAHNEMANN AND THE LATER HOMŒOPATHISTS.

In his great work, the *Organon*, Hahnemann set forth disease as the entire sum of the symptoms arising from or consisting in a disturbance of the harmonious action of the vital principle "by the dynamic influence of a morbific agent which is inimical to life." He declares accordingly that "the physician must avail himself of all the particulars that he can learn, both respecting the probable origin of the acute malady and the most significant points in the history of the chronic disease, to aid him in the discovery of their fundamental cause, which is commonly due to some chronic miasm. In all researches of this nature he has to take into consideration the apparent state of the physical constitution of the patient, particularly when the affection is chronic, the disposition, occupation, mode of life, habits, social relations, age, sexual functions," etc.

Thus Hahnemann looked upon the perceptible phenomena of the disease as means of arriving at a knowledge of their generating cause—which is, so to speak, an intellectional, unsensuous fact, exclusively determinable by the pure reason, or intuition, anterior to all sense-perception and elevated into the speculative region of the causative principles of nature. He plainly rejected the materialism which pervaded the great body of modern medical teaching.

MEDICAL TREATMENT.

Hahnemann recognized three methods for the accomplishing of cures, namely: the *allœopathic* or *heteropathic*, the *exanthiopathic*, and the *homœopathic*. Nature he held to be incapable of curing an existing disease by means of one that is dissimilar; hence energetic

drugs administered upon the allæopathic principle are ineffectual to remove the disease. Thus, for example, the combination of mercurial and syphilitic symptoms constitute a frightful and unmanageable disease, which, if not absolutely incurable, yields only to the most careful and persevering treatment. The exantiopathic method is merely palliative, and is likely through its alternate or reactive effects, to aggravate the original complaint. Only the homœopathic treatment, therefore, is left to be employed. The medicinal agent creates a medicinal disease which is more intense than the other, which usurps the place of the other, and is, in its own turn, extinguished by the vital forces, leaving the vital principle in its former state of integrity. The efficacy of medicines, therefore, depends upon their pathogenetic character.

ADMINISTERING OF MEDICINES HOMŒOPATHICALLY.

A prominent feature in the mode of administering remedies consisted in their attenuation. This was for the purpose, Hahnemann declared, of developing *the spiritual power which lies hid in the inner nature of medicines.* The inherent spirit and principle of the medicinal agent is thereby set free and is made available by temporarily connecting it with some neutral body, as sugar of milk, alcohol, or water. This curative influence is detached more readily from such a neutral body so as to act promptly upon the disease. Hahnemann and his disciples believed accordingly that the medicinal power of a drug is not only developed, but is rendered more intense by their peculiar mode of preparing the attenuations. The more complete the attenuation, the more potent and certain, they taught, the remedial energy will become.

In order then to bring his system of practice to higher perfection, Hahnemann inculcated the *specific* mode of administering medicines and directed the giving of a single remedy at a time for a definite result. "In no instance is it requisite," said he, "to employ more than one simple remedy at a time for a definite result." Not only did he denounce the polypharmacy which was in vogue, the employing of formulas including a prodigious number of ingredients in a mixture, but he disapproved even of the combining of a small number of remedies in a prescription. "In no instance is it requisite," said he, "to employ more than one simple medicine at a time." Hence the strict Homœopathic physician never adds two or more medicines together, although he may administer remedies in alternation at suitable intervals.

FURTHER REFINEMENTS OF HOMŒOPATHIC DOCTRINE.

Disciples of Hahnemann appear to have carried the spiritualism of his teachings even beyond the master himself. Several of them inculcated that the smelling of medicines is often sufficient. Professor Joseph Rodes Buchanan discovered symptoms and results actually produced by the holding of medicinal substances in the hand carefully shielded from any direct physical contact. M. Granier, of Nîmes, explains the matter as follows:

"Medicines are fluidic powers; they are living things (*êtres*) that man may create at his will. I wish I could say that they are occult powers, forming the chain between the world and the tomb. I am convinced in my own mind, however, that our faculty of observation, placed on the confines of *fluidic dynamism*, might cast its scrutinizing glances into the unseen world.

It is more than probable, nevertheless, that Hahnemann did himself entertain similar conceptions. This seems to be indicated by the facility with which his utterances have been adopted into different forms of belief which have appeared in later years. Dr. J. J. Garth Wilkinson, of London, himself a receiver of the "Heavenly Doctrine" of Emanuel Swedenborg, and familiar with the magic and psychal phenomena of modern spirtualism, declares that "the practical blessings of the NEW MEDICINE are dependent chiefly upon the Science of Correspondences, which, bringing poison and medicine together with a complete fitness, poisons the disease and kills it; and secondly, upon the smallness of the dose—or we would rather say—the use of the SPIRIT and not the body of the drug." Given in this way, he adds, they are more like spirits than material bodies.

SCHOOL OF SPECIFIC MEDICINE.

About the year 1820, the medical world was agitated by a general movement for a higher scientific advancement, and for greater breadth and freedom of individual judgment. The cocoons were quick with a new life, and the tenants became impatient of swaddling-bands. Conservatism had ruled with an iron hand, but it must give way and forbear to check enquiry when the time for the new birth is fulfilled.

The influences which were active to produce disintegration in the various elaborate dogmatic systems, were exhibited in their full force in the ranks of the Homœopathic school. Perhaps this was because it was the latest, and therefore less contracted and able to withstand disrupting influences. As early as 1820, there had arisen in southern Germany a spirit of

dissent from many of the doctrines promulgated by Samuel Hahnemann. Eminent physicians had given his theories a cordial welcome, but felt conscious at the same time that the system was still immature, and required further development. For a time, however, they refrained from any open questioning. In religious bodies there has been a disposition to regard any differing from the standards as virtual apostasy, and individuals offending in that way were exposed to the treatment of renegades. It has been the same in the various medical circles. Nevertheless, it is not practicable to suppress honest conviction by the despotic pressure of any consensus of leading opinion. Majorities are not the arbiters to determine what is true, and new wine cannot long be compressed into old vessels. It was perfectly natural, therefore, and indeed inevitable that men in the Homœopathic ranks who had already foregone professional standing and emolument for the sake of what they regarded as a higher truth, should be desirous to eliminate from the new doctrine any crudeness, or vestige of error that might still inhere. Accordingly, as early as 1824, Doctor Gottlieb Ludwig Rau, of Hesse, published a treatise* with the purpose to impress upon his fellow Homœopathists the importance of possessing more thorough scientific and technical knowledge. He disputed the authority of any umpire to determine what should be received as true doctrine, and expressed distrust of the metaphysic which underlies the leading doctrines of Hahnemann. "Others have felt the necessity like myself," he declared; "they have proclaimed it without fearing

* *Ueber den Werth des Homöopathischen Heilverfahrens* — The Value of the Homœopathic Practice of Medicine.

the reproaches of those who delight in servile obedience, and have made every endeavor to discover errors, to procure the rejection of inadmissible hypotheses, to submit dubious assertions to a severe criticism, and above all, to develop the New Doctrine."

To sciolists and practitioners without thorough education, such a proposition is never acceptable. Able men of the Homœopathic school welcomed the publication as auspicious of a more gratifying condition of affairs. While retaining their regard for Hahnemann they were reluctant to accept his notions in regard to medical study, and failed to appreciate the refined and philosophic theories which he propounded. They acknowledged the value of medical systems to guide in practice, measuring their correctness from the application of their principles. "Medicine cannot be studied like a mechanical trade," Rau declared; "in every school of practice the physician must possess the necessary preliminary knowledge."

These utterances presently met with a hearty response all over Germany. A journal was established in 1836 to explain and defend them, and not long afterward a medical congress was held at Magdeburg, at which the exceptionable doctrines of Hahnemann were formally repudiated and a platform was adopted which affirmed the theory of Specific Medicine.

It was necessary that a text-book should be prepared to set forth dogmatically the principles of the new movement. To meet this want, Dr. Rau issued his celebrated work, the *Organon of Specific Medication*,*

* *Organon der specifischen Heilkunst.* von Dr. Gottlieb Ludwig Rau, Grossherzoglich Hessischen Hofrathe und Physicus zu Giessen mehrerer gehlerter Gesellschaften Mitgliede. *Non qua itur, sed qua eundem est.* Leipzig. Verlag von Ludwig Schuman. 1838. Pp. 392.

in which he sets forth fully his position. In his preface he defines his sentiments and motives:

"Neither attachment to a system, nor party spirit, but an ardent and profound conviction of the superior importance of the Specific Art of Healing [*Heilmethode*] has inspired me for seventeen years to active effort for its promulgation. When, after a practice of twenty-two years, I became acquainted with its principles, which had been but imperfectly developed at that time, I was led to believe that it would presently emerge from its isolated condition as an empiricism, and take an exalted rank by the side of the other schools of medicine.

"Even the sentiment of gratitude to SAMUEL HAHNEMANN, the founder of this doctrine, could not prevent me from being conscious of its imperfections. Indeed, it was because I fully appreciated the superior importance of the Specific Principle of Healing [*Heilprinceps*], that I regarded it as a sacred duty for me to devote my energies to this branch of knowledge. For this reason there was nothing in the world sufficient to hold me back from following this conviction—neither the contempt which brainless partisans openly express for every aspiration for higher attainment in science, nor the coarse language which the blind champions of the old dogmatism saw fit to employ in their unscrupulous attempts of later years to destroy the young school, nor the propensity which has been carried out by certain authors, and especially by several contributors to medical journals to call its adherents by nicknames, the mere repeating of which would be an insult to every sense of decency.

"In asserting the right to express my judgment in regard to the matter under consideration, I believe that I am abundantly justified by the purpose which I have already declared to make use of all laudable means to extend our knowledge so as to avoid becoming one-sided. In the course of study which I had marked out for myself, other men of eminence and superior learning have gone beyond me, and others

have taken their place at my side. I had hoped, therefore, that a fellow-worker of greater experience and erudition would take up the subject from the foundation and construct a system of Therapeutics. This expectation, however, has not been fulfilled. The want of such a structure, complete in its several parts, has been keenly felt, and I considered it high time to bring out a work of this character in order to enforce on the young practitioner the reasons for thoroughly studying the system in all its essential principles, as well as to show adversaries of Specific Medication [*Heilkunst*] the superiority of principles firmly established to those which are founded upon scientific conjecture, and so to furnish to an extent, a summary of what has been lacking heretofore to make this doctrine complete. For this purpose this book has been written.

"When therefore, I follow the example of Hahnemann and select the title *Organon*, let no one charge me with presuming to believe that I was bringing to perfection a doctrine which is still capable of greater development. Instead of that I must expect,—indeed I earnestly desire and hope, that through a more liberal expanding of the human mind and further experience, much of what we have so far learned will present a different appearance. But I am likewise certain that intelligent investigation will establish the conviction that what has, after years of long and careful testing, been recognized as true and right, must supersede what is known only as the belief of a single individual. So long as Truth is the common property of all mankind, it may not be assumed that any one person holds it as his exclusive possession ; and therefore, what any one sincerely believes to be true it is the most sacred duty of his life to proclaim."

With such convictions, taking a broader conception of his calling, and refusing to be circumscribed and limited, even by the authority of a teacher whom he highly revered, Rau boldly entered the field with the

new form of doctrine. He had given due credit to those who had preceded him, and he was frank to acknowledge the probability that we would never arrive at a solution of the problems of nature which would be perfectly satisfactory. He criticised the theories then in vogue as being views of fact from only one side. "When we consider the narrow limits of our physiological knowledge," says he, "we shall not be astonished at the obscurity of pathology ; and thus at once will be made manifest the vagueness and uncertainty of our therapeutic postulates. True, this uncertainty is denied by a great number of physicians —particularly, by those narrow-minded practitioners, who accord unlimited faith to the text-books and to the lectures of their teachers ; or, perhaps, by those who have too high an opinion of their own wisdom to admit that the splendor of the Medical Art is darkened by extensive spots. On the other hand, however, many distinguished practitioners and celebrated writers have complained of the imperfections of our knowledge, and have shown that those who know the most feel them most keenly."

Rau deprecated the trend of pathology to gross materialism. "There are pathologists," he remarked, "who are at the point of overlooking the existence of a vital activity, and who reject almost everything which they do not either see or hear. The stethoscope, pleximetre and microscope, are their surest means of diagnosis ; and there are physicians now-a-days who know more about the movements and coverings of the blood-disks, than about the mode in which morbid conditions develop themselves."

He also refers pointedly to the violent adversaries of the Specific mode of treatment, and shows that

they differ in opinion among themselves on about every important subject. Finally he declares that although we possess a large number of excellent descriptions of disease, all our knowledge in regard to the causes of disease is scarcely anything but speculative, and a tissue of contradictions.

With equal plainness, he reprehended the half-instructed disciples of Hahnemann. They were not able, he declared, to appreciate what had been done to render their school more stable and scientific, but ridiculed every such endeavor with a vehemence deserving of severe censure. He likewise rebuked the presumption with which they, after having made one or two lucky cures, were so apt to consider themselves perfectly capable of treating any disease successfully. Even Homœopathy itself, as promulgated, he believed to fall short of the mark. "The New Doctrine, as it has been set forth by Hahnemann, and received as sacred by a great number of his disciples, does not, in our opinion, satisfy a just and impartial criticism."

The attempt to combine Homœopathy with the other system, Rau declared, was certain to prove fruitless. The therapeutic principles of the Old School are contrary to those of the New School. The *antipathic* or *exanthiopathic* method has proved inadequate; the *revulsive* method has merit, but is carried too far; the *specific* method, developed by Hahnemann, is more certain and effective. Dr. Rau, accepting his doctrine of healing, nevertheless criticises absolute rejecting of what has been learned and discovered before him.

"All that Hahnemann requires is a careful study of the external phenomena of a disease. These, in

his opinion, are sufficient to enable a physician to select the proper remedy. It is needless to say that a method, which embraces only the external phenomena, cannot be anything else than *symptomatic*."

Conscientious believers of the Specific Method had long felt, he remarks, that Hahnemann's treatment was uncertain. External symptoms are not the only indications of what is required for a cure. They constitute the reflection of some internal dynamic disorder which only the mind can apprehend, but which must be known in order to place the treatment on a safe basis. Rau proposes accordingly to perfect the work which Hahnemann began, "by picking out the particles of truth in whatever system he may find them, and by means of the Specific principle, arranging them into one harmonious whole."

The bold attitude which he assumed, as is usually the case with leaders of new thought, was widely distinct from that of other Homœopathists. Indeed, there were few ikons that he professed to worship. His ground was not very unlike that taken by Dr. Rush. "The most successful and the most celebrated practitioners," he affirmed, "are those who have kept aloof from systems and have been eclectics."

He refused to accept the psora-theory in its entirety, and declared that the classification of diseases as acute and chronic, was of very little use in practice. Yet he admits that the psora-doctrine had had considerable influence in the development of the dogma of Specific Medication, and had led to the discovery of truth, which even the most devoted partisans of Hahnemann failed to perceive. He also affirmed that there are a great many diseases, the inveterate character of which is owing to a disturbance of the vital

action of the vegetative system, from which proceed the abnormalities which are generally designated by the term *dyscrasia.* "It is true," he adds, "that syphilis, sykosis and psora occasion many disorders, and that diseases [*krankheiten*] which are occasioned by a contagium, unless radically cured, frequently leave a morbific principle with organism, which manifests itself in different forms. Nevertheless, it is equally true that diseases greatly resembling one another, and exhibiting the known forms of dyscrasia, frequently arise from other causes that are equally obstinate, without originating from a contagion."

His theory of Life and its Manifestations lies at the foundation of his doctrines, and should, therefore, receive careful attention. It reminds one of former philosophic theorems.

"Individual life cannot exist when contact with the outer world does not take place, through which, according to the principle of Twofold Causation, activity is brought into existence. For life itself is not the energy; it is the manifestation in active form, and the entity through this inner force, on account of which reäctions against the universe [*makrokosmos*] take place. * * * The reäcting process takes place in the organism, and is an abnormal condition of the organism, but not of a different life. The phenomena which characterize the process of reäction take place agreeably to the laws of the organic vitality. If, therefore, disease is a mere modification of the reäcting process, it is impossible for the organism to reäct against its own reäction."

Again, when treating of the effects of drugs, he lays down the postulate, that the vital process is neither mechanical, nor chemical, nor stoichometric, nor electro-galvanic, but is a higher energy which avails itself

of these subordinate principles in the performance of its functions.

He explains reäction as identical with the natural healing energy [*natur heilkraft*]—the power of the living organism to oppose harmful influences. He distinguishes between reäction and *counter*-action. The former he defines as an energy of the organism primarily excited by the influence of an external agent; and the other as synonymous with "secondary action," and contrary to primary action. Hahnemann regarded the latter as being the real curative action, whereas physicians of other schools consider both forms to be curative.

In the department of Therapeutics, Dr. Rau exhibited a like proclivity to discrimination. Disease, he explained as being a vital process, which manifests itself to our senses by symptoms. In order to know these correctly, ætiology and anamnesis are indispensable; the former as upholding the causes, and the latter as setting forth the unhealthful influences previously existing, which opened the way for the disease. There are always two agencies coöperating in the production of disease: an external, which is the morbific cause, and an internal, which is the organism itself. Rau affirmed the doctrine of Sydenham and others—that the general character of diseases at any given period, is determined by the prevalent sidereal, telluric and meteorologic influences. The determining influence will manifest itself, more or less, in every single instance.

Our epidemics generally illustrate this fact. The late Dr. John M. Scudder, of Cincinnati, remarked at a meeting of the Connecticut Eclectic Medical Association, in 1892, that he had observed every recurrence

of Asiatic Cholera in this country, and that the type on each occasion differed materially from the others. The medical treatment, which in one epidemic was most successful, was in the others, more or less, a failure.

The statement of Hahnemann in regard to blood-letting, that no one has a drop of blood too much, and it is wrong to shed it, took the medical world by surprise. When he made it, physicians generally had gone mad after venesection. Other gifted men, of various periods, had taught the same sentiment. Chrysippos, Eristratos of Alexandria, and Van Helmont, are of the number. Dr. Rau, however, took a different view. "There may be excessive secretions," said he, "of mucus, gastric juice, bile, semen, cerumen, sweat, urine, serum; why not of blood? There is no physiological reason why the blood should be an exception."

Dr. Rau also disagrees with Hahnemann in regard to the mingling of several ingredients in a prescription. He cites the fact that mineral waters that have wonderful healing virtues are compound substances and that vegetable remedies themselves, and the salts, are in no sense simple elements. Many pharmaceutic compounds are known to possess therapic value, and several have become standard preparations in the pharmacopœia. Among these he names calomel and opium, ammonia and tartar emetic, nitre and lauro-cerasus, cinchona and tartaric acid. He remarks, however, that it is wrong to make medicinal compounds, as we sum up numbers, and to suppose that the effect of all the substances intermingled contains the effect of each in its generic form. "There is no doubt whatever," he declares, "that compound

prescriptions may be used with advantage in some cases, provided that we have previously ascertained their pathogenetic effects upon the healthy organism."

He likewise takes exception to the refinements of Hahnemann in regard to dynamisation. He asserts, positively, that the notion that the medicinal powers of a drug are developed by attenuation, can properly apply only to the earths and metals, and these virtues are completely developed in the first clear, transparent solution. "*If that power were increased by the attenuating process, every remedial agent would be converted into a deadly poison.*"

He accepted the theory that the dynamic force of a drug may be separated from its material substratum, and transferred to the attenuating vehicle, like the electric fluid from the cylinder to the conductor. But he objected strenuously to the use of the term *spiritual* in connection with dynamised medicinal agents. A spiritual thing, he argued, is understood to be something not material, whereas the medicinal agent, even though it be ever so minute in dimension, is still matter.

Plausible and conclusive as this reasoning may seem, we opine that the vision of the master has transcended the logical faculty of the other. It is significant, that the division of sentiment and practice in the ranks of Homœopathy had its inception in this very matter.

Rau acknowledged frankly, that all our knowledge of pharmaco-dynamics was only fragmentary. There had been no right system developed—no systematic arrangement of specific remedies, with an explanation of their virtues. Whether such a classification would be possible at a future period, he did not attempt to

predict. The physician must disentangle the chaos of symptoms, separate the essential and constant effects from those which are only accidental, and obtain clear perception of the dynamic action of the drug which he proposes to employ. "Too many," he affirms, "too many think themselves competent physicians, whose only claims rest upon the possession of a medicine-case and a *Repertory of Specific Medicines.*"

Dr. Rau employed only the drugs more commonly in use. He sought not to add new remedies to the number, but to unfold their specific properties and application. He, nevertheless, sternly deprecated the violent medicines in vogue among other physicians.

"Nature, the great Teacher, shows us the way to cure disease without the use of cruel and dangerous drugs," he declares. The remedy should be chosen, he insisted, not because it is capable of producing symptoms which are similar to those of the disease, but because the general state of the organism arising from the action of the drug is similar to the general character of the disease.

The efforts of Dr. Rau and those in sympathy with him resulted in the general reception, especially in Southern Germany, of the tenet of Specific Medicine differing in essential particulars from the teachings of Hahnemann. "Under the leadership of such men as Rau, Griesselich, Trinks," says Dr. Charles Hempel, "they organized an opposition to the Master, which has completely changed the aspect of the Homœopathic School in Germany."

He further describes them that they had the courage and the talent to elevate it beyond the narrow limits of a mere science of sensual symptoms to the exalted rank of a rational and queenly Truth, to which chem-

istry, anatomy, pathology, and physiology became subordinate and obedient, but indispensable supporters. They denied the fundamental dogma that the Homœopathic system was the only method of cure, and even declared Hahnemann himself to be wrong in applying to the various Old-School systems the collective name of *Allopathy*.

Rau made choice of the designation Specific Medication [*Specifischen Heilkuntz*] because he thought it likely to attract more disciples and give less offense. In fact the difference between his followers and the physicians of the Old School consists not so much in the means and medicines used as in the rule by which they are employed. It became, therefore, the province of others to establish a reform in medicinal agents as well as in the prevalent theories.

The new doctrines appear to have had a marked influence upon medical sentiment generally, both in Great Britain and elsewhere. There had been an increasing ferment in opinion for years, bringing new opinions to the surface. The Botanic and Reformed Schools of medical practice sprung up in the United States, and their distinctive doctrines met with warm sympathy among all classes in England. A Medico-Botanical Society was formed in London and continued for many years, having for its objects an improvement in medical procedures and ulteriorly a complete reformation in the practice of medicine. Members of the nobility and of the more intelligent classes, were identified with the movement. The Royal Family signified an unequivocal preference for physicians whose sentiments were liberal. Sir James Clark was appointed in 1835 physician to the Dutchess of Kent and the Princess Vic-

toria; and upon the accession of the latter to the British throne, she placed him at the head of the list of Royal physicians, despite artful endeavors to prevent.

For a time the hope was confidently cherished that there would be a radical change in medical practice, and a union of enlightened and liberal physicians of various shades of sentiment upon a common basis. The *British and Foreign Medical Review*, conducted by Dr. John Forbes, afterward physician to the Prince Consort and Royal household, supported the proposition. Dr. Balfour, of Edinburgh, visited Dr. Fleishman's Homœopathic Hospital at Vienna, in 1846, and gave his observations in a letter which was published in the *Review*. He testified to the extraordinary frequency of recoveries at the institution, but left the question open whether they were the result of the treatment, or of the healing energy of nature unobstructed by medication. Dr. Forbes commented at length upon the subject, declaring that the case had not been proved for Homœopathy. He also took occasion to reiterate the position which he had taken several years before, upon the general subject, namely:

"1. Nature is more powerful in the curing of disease than has been commonly supposed.

"2. Prevailing notions in regard to the curative properties of medicines should be re-investigated.

"3. Nature as a *vis medicatrix* has more to do with restorative operations than has been generally believed; and

"4. The Hygienic—the Eclectic—the Hippocratic—the Rational System of treating disease is the only one that can be justified and vindicated."

Sir Humphrey Davy has justly remarked that there are much greater obstacles in the overcoming of old

errors than in the discovery of new truths. It was not practicable to unite the different schools of medicine, or even to continue the movement for a better and more enlightened practice. The disciples of Cullen, Brown, and Broussais, and the favored class of Continental physicians were not willing to harmonize together with those who did not subscribe to their dogmas. The jealousies and antipathies of the latter also were too active, strengthened as they had been in many instances by the remembrance of willful injury, persecution and misrepresentation. Dr. Forbes was obliged to suspend the publication of the *Review*, and the endeavor to establish a School of Liberal Medicine was abandoned.

Meanwhile the radical changes which had been introduced into the Homœopathic Practice in Germany were extended to other countries. Dr. Charles J. Hempel was the first in America to controvert the peculiar doctrines of Hahnemann. He published a treatise entitled the *Organon of Specific Homœopathy*, in which he deliberately charged Hahnemann with having sought to foist upon the medical profession a system that was both incomplete and partially unsound. Adopting to a great degree the distinctive sentiments of Dr. Rau, he set forth disease as being not merely a juxtaposition of symptoms, or subjective sensations, but a condition of the organism, a disturbance of normal action—an inferior degree of health. The intelligent observer is aware, he adds, that the phenomena of disease are as definite and logical as the phenomena of health, and that the physiological functions serve as a basis to pathologic facts and symptoms. It would therefore be impossible for a physician to trace the phenomena of disease to their point

of beginning—where the organism first became invaded by the morbific principle, unless he possesses the most accurate knowledge of physiology and pathology. Without such knowledge, the art of healing would remain hereafter the same as it has been in a great measure heretofore, a system of speculative theories and hypothetic assumptions.

A drug, in order to acquire the character of a remedy in a given case of illness, Dr. Hempel inculcates, must invade the organism by the same door, so to speak, as the morbific principle. The *similarity*, which is the essence of the Homœopathic dogma, should not pertain merely to the outward resemblance of the drug-symptoms to the symptoms of the disease. It must go deeper and apply to the drug-disease reflected by its pathogenic symptoms and likewise to the morbid conditions or pathologic state of the organism. He concludes accordingly with this important declaration :

"The formula should, therefore, imply a PERFECT CORRESPONDENCE between the drug-disease and the natural pathological disturbance ; and in order to leave no doubt that this compound similarity or perfect correspondence is the import of the formula, a more adequate expression thereof would be : CORRESPONDENTIA CORRESPONDENTIBUS CURANTUR."

This proposition, it will be observed, is in accord, if it does not denote an actual accepting of the doctrine of Emanuel Swedenborg, that there exists a correspondence between all things spiritual or psychic, and all things physical. Indeed, there has always been a strong partiality of members of the "New Church" for this "New Practice" of medicine. "All things which bring harm to man are called *uses*," says Sweden-

borg; "but *evil* uses,—because they are of use to the evil for doing evil, and they conduce to absorb malignites—*thus also to cures.*" The "Homœopathic law," set forth by Hahnemann, is not accepted, however, by all New-churchmen. "An artificial disease is not induced," says Mr. W. E. Payne, in the *New Church Repository*, "but the operation is a commingling of like spheres beyond the influence of the law of elective affinity, and consequently a removal of all opposing spheres beyond the circuit of the action of each."

Dr. Sharp, of Rugby, England, reiterates the sentiment of Dr. Hempel, namely: That the doctrine of similars should not have regard to the symptoms merely, but likewise to the pathology of the case; also, that the drug used should be one that shall affect the very organism that is disordered. He further declared that Homœopathy cannot become a science till it shall be founded upon what he calls *Organopathy*, or upon a more careful consideration of the seat of the disease, than Hahnemann has inculcated.

Dr. Kidd, of London, goes so far as to deny the absoluteness of the fundamental dogma of the Homœopathic School. He taught that there were two laws of cure, both that of similarity and that of contraries. In his treatise on the *Laws of Therapeutics*, he adheres to the concept of the relation between the action of medicines upon the healthy and their curative idea in sickness; but he insists that in most cases that this relation is either of similarity or of contrariety. He then deduces the following principles:

"Looking to the observation of facts apart from theoretic speculations, *two primary laws of therapeutics*

unfold themselves. These two laws of therapeutics may well be called *Galen's Law* founded upon the rule of *contraria contrariis*, and *Hahnemann's*, or the *Homœopathic Law* founded upon the relationship of similars."

Dr. George Wyld, of London, widely known as a Homœopathist, carried these postulates to their logical conclusion, and in a letter to the *Lancet*, in 1877, proposed the actual disbanding of the Homœopathic School, assigning for it the following reasons :

"1. That the views expressed by Hahnemann are often extravagant and incorrect.

"2. That Hippokrates was right when he said that some diseases are best treated by similars, and some by contraries; and therefore it is unwise and incorrect to assume the title of *Homœopathist*.

"3. That although many believe that the action of the infinitesimal in nature can be demonstrated, its use in Medicine is practically, by a large number in this country [England], all but abandoned."

This assertion of Doctor Wyld in regard to the professed Homœopathists of Great Britain, is likewise true of the majority of the Homœopathists in America. There are those, however, who still adhere to the high attenuations of medicaments, and to the dogma that the causes of disease are spiritual or dynamic. But those who are in accord with the refinements and high spirituality of the doctrines of Samuel Hahnemann are comparatively few; and they are generally regarded by the others as visionary, and even as ultraists. Unlike their leaders, Rau and his associates, the latter class in this country generally adhere tenaciously to the designation of Homœopathist and subscribe formally to the doctrine of similars. In this matter, however, they are no more inconsistent

than is common in other circles. Parties in politics are seldom correctly defined by the names which they bear. It is almost universally the case that sects and schools cease, after a little while, to adhere strictly to the beliefs which first brought them into existence.

It is not in the province of this work to handle the problems which are thus presented. That medicines do not always act alike with individuals of different temperament, has been often observed. They sometimes aggravate as well as ameliorate a morbid condition. There are likewise forms of disease which do not correspond to the effects of any known drug in the materia medica. We are at a loss to know how aconite has, according to the principle of similars, any place in a Homœopathic medicine-case. As a general fact, however, modern physicians of the Homœopathic school, do not often stickle for any rigid adherence to their theory, but take the plausible ground that their first obligation is to the patient and their duty to employ the best means at hand for his benefit. They generally, but not all of them, adhere to the usage of administering a single remedy at a time, according to the theory of Specific Medication, but they frequently give doses far the reverse of infinitesimal. Some employ by preference the remedies and therapeutic measure of the Eclectics, leading many individuals to mistake their professional character; while others follow in the wake of the Old School, apparently more desirous to receive some formal recognition from Allopathists than to endure social ostracism and political proscription for the sake of principle. Hempel asserted that modern Homœopathy is not at all like the old-fashioned Hahnemannism, and its advocates declare that its procedures are

more curative and beneficial. This may be true; certainly it is difficult for a physician to accomplish much good with a mode of treatment when he does not enter into the spirit of it, or believe in its utility.

Hahnemann seems to have expected that the general dissemination of Homœopathic doctrines would have the effect to take the medical art out of the hands of a professional caste, and to domesticate it in the homes of the community. This expectation has not been realized. An advanced civilization tends necessarily to differentiation of opinions, employments and professions. The ideal of a progressive commonwealth is: equal opportunity for all in a land of equal rights. To this end there must be diversity of occupations. To require every individual to execute all the callings, to be his own physician, tailor, shoemaker and tiller of the soil, would be a progress toward savagery; and to establish a single school of medicine, inhibiting and suppressing all others, is to place an obstruction in the way of an ideal civilization.

HONIGBERGER AND THE "MEDIUM SYSTEM."

The French Revolution was the boundary between the former and later Europe. Under its influence, the various departments of scientific investigation exhibited new energy. Medical study received a new impulse, which was presently extended to the field of therapeutics. The favor extended to Homœopathy in intelligent circles in Europe, and the various Reform movements in America, indicated the setting of the wind. As far away as India the influence was perceived, and a new system was developed, which not only conferred benefit where it was promulgated,

but provided a storehouse from which European and American innovators in medicine did not hesitate to procure material for their own work. This was the *Medium System.*

Johann Martin Honigberger, its founder, was born at Kronstadt, in Transylvania, in 1795. He early developed scholarly tastes, becoming first a skillful linguist, and afterward graduating in medicine. He then set out to seek his fortune. "A secret impulse," says he, "an inward voice, urged me toward the East." He left home in the spring of 1815, making his way slowly through the Principalities, and reached Constantinople in December of the next year. In 1817, he continued his way through Asia Minor, obtaining little patronage in his profession, but suffering from various endemic disorders. Finally, in 1819, he was able to visit the "Holy Places." He went thence into Egypt, and engaged in the service of Mehemet Ali, the Viceroy. The plague breaking out, soon afterward, he resigned and made a hurried departure to Tripoli, in Syria.

Small-pox raged here in the epidemic form, cutting off infant and adult alike, with a terrible fatality Dr. Honigberger resorted to vaccination, thus introducing the art into Syria. He described his success as very great. He was, however, confounded by later experience. When he afterward performed the operation at Lahore, in India, his vaccinated patients contracted small-pox like others. He imputed this to fault in the virus. "At that time," he remarks in his biography, "I had forgotten having read somewhere that vaccine matter might be procured by inoculating a cow with the venomous matter taken from the small-pox, and that the venom is thus turned into a remedy."

While in Syria, Honigberger paid a visit to the Sheikh of the Druses, at Besherri, and observed that the inhabitants of the place were not affected by vaccination, and that none of them took the small-pox.

In 1823, he became the physician to Daoud [David], the Pasha of Baghdad. Learning at a subsequent period that several French officers were at Lahore organizing the army of Runjeet Singh, the chieftain of the Sikhs, and had no European physician, he resolved to go thither. He set out accordingly, and succeeded in reaching Isfahan, but was compelled to return. In December, 1829, he undertook the journey with better success, arriving at Lahore the following April. He entered the service of the Mahárája, and remained for four years. The passion for home then seized upon him, and he obtained leave to resign. Returning by way of Kabul, Bokhara, Karakum, Orenburg and Russia, he spent a season at Kronstadt, and then made the tour of the Continent.

Hahnemann, worried by medical persecution, had made his residence at Paris. Here Honigberger visited him, and was delighted at his reception. "The open and good-natured Homœopathist," he says in his diary, "made many interesting revelations to me respecting his New Method of Healing." Honigberger afterward visited Köthen, and obtained from Dr. Lehmann, Hahnemann's apothecary, a quantity of the genuine Homœopathic medicines. He spent the summer of 1836 at Vienna. Here he was attacked with Asiatic cholera. He treated it with ipecacuanha prepared by Dr. Lehmann, and recovered in six hours. He was now a Homœopathist.

His next enterprise was to introduce the New Method into Turkey. The plague was raging at

Constantinople, and every house that was regarded as infected was closed. Honigberger made his way to the hospital at Pera, and without any special permission, attended the patients at his own expense. He employed the Homœopathic treatment, and with encouraging success. He remained at the Turkish capital two years, and had an extensive practice.

Word now came to him that Runjeet Singh desired him to return to Lahore. He set out accordingly, in company with General Ventura. Upon reaching Pali, in India, he was attacked with the plague peculiar to that region, and treated it successfully with Ignatia, a remedy of which he had learned in Armenia. He arrived at Lahore, but too late to be of service to his former patron. Runjeet Singh was very ill. The Homœopathic treatment was employed, and promised good results; but a consultation of native physicians was held. These were Hakhims,* pundits,† and astrologists. Of course, Honigberger was overruled. Another mode of treatment was adopted, and the Mahárája died in two weeks.

This was the prince in whose presence the *saät* or fakir, Hari Dhas, by voluntary effort, asphyxiated himself. He was buried in a grave enclosed by a wall, and the place watched by a guard. Barley was sown over the spot as a further precaution. At the end of forty days, the Mahárája, General Ventura and several Englishmen witnessed the disinterment and resuscitation. Dr. Honigberger gives this account as it was related to him by General Ventura. The same fakir underwent this experience several times,

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* "*Wise Men*," the title given by Arabians to their physicians.

† A *pundit* is a learned man of the Brahman caste.

once remaining underground four months. Can it be that this peculiar faculty is a relic of the habit of hibernation possessed by human beings in far-off ages?

Dr. Honigberger remained at Lahore till 1849, when the annexation of the territory of the Sikhs to the British dominion put an end to his official career. During this period he had accumulated an invaluable amount of knowledge in natural history, archæology, and the methods of treating the sick in vogue in India. He observed the success of the natives in the employment of mesmerism, and noted the perfect anæsthesia produced by Dr. Esdaile, at Calcutta, which enabled the painless performance of many capital and other surgical operations. He made a large collection of Kashmirian plants, which were afterward arranged and classified by European botanists. His distinction as a savant and physician was acknowledged by the leading scientific journals. He was the author of several learned treatises, in both English and German. The proceeds of their sale, which amounted to a considerable sum, he devoted to the establishing of an educational school in his native town.

Such was this man, worthy to rank among the benefactors of the world. Always looking for opportunity to be of service in cases of mortal necessity, broad in sympathy, yet never forgetful of his own, Johann Martin Honigberger should not be left unremembered.

Our chief interest in him on the present occasion, however, relates to the peculiar medical system which he propounded. For twenty years he had followed his profession after the manner in which he had been instructed. He then adopted Homœopathy, under

circumstances highly favorable. He was not bigoted or one-sided, however; he used to say that a rational physician may be successful by both systems. Yet, while abandoning the one, and finding much to approve in the other, he could not accept unqualifiedly the teachings of Hahnemann. He had a varied and not altogether satisfactory experience in the New Method. In many cases the most minute doses proved efficacious, but in other instances they produced no benefit whatever. "I am bound to confess," he finally declared, "that in the majority of cases, the results which I obtained from Homœopathy were not favorable; I felt persuaded that larger doses would have been better."

He describes the two systems, "*Allœopathia* and *Homœopathia*," as two opposite poles, and condemns the violent and heroic methods of the former, with its enormous pills and powerful mixtures, alike with the feebleness and inertia of the latter, with its pygmæan flasks containing Liliputian pills and minute drops. "I found," said he, "that the *enormous* doses generally administered by the Allœopaths, and also the *infinitesimal* ones used by the Homœopaths, were, both of them, far less beneficial than they should be. This observation induced me to investigate the matter with much earnestness; and in the extensive practice which I had at Lahore, I was induced to adopt *the medium between these two extremes.*"

Then, as though believing a propitious fate awaited his peculiar doctrines, notwithstanding their apparent trimming, he adds:

"I knew full well that in politics the *juste milieu* does not enjoy a great share of credit, especially since Louis Philippe has lost by it the throne of France;

but that which is incongruous and inconsistent in politics may be otherwise in the Empire of Science; and the numerous successful results, which I have found the *Medium* System to have effected, have tended strongly to confirm these convictions."

Honigberger arraigns the heroic or "Allœopathic" practitioners for their violent medication, and their unwillingness to investigate or adopt improvements.

"It would be much better when such medicines are used in undiluted doses only, to desist from using them. It is really pitiable, when all other Arts and Sciences have made such important progress, that Medicine should continue stationary; that its professors, from an unwillingness to investigate the nature, virtue or proper use of medicinal substances, should fancy themselves bound to condemn simple yet efficacious plants to oblivion, as things which Providence has created for the delight of our eyes only, and which are sure to injure us, should we attempt to use them. Where are the Salvia, the Ruta, Euphrasia, Imperatoria? As for the deadly poisons, calomel and opium, these glitter as fatally brilliant in the East Indian medical horizon as they do among English physicians."

In selecting his Materia Medica, Honigberger pleaded earnestly in favor of procuring remedies from the indigenous plants of every country. This he frankly avowed was for economical reasons. He accordingly enriched his collection by many medicinal plants belonging to the Flora of India. Nevertheless, he was not an advocate of remedies exclusively from the vegetable kingdom. He experimented with serpent-poison and other animal substances, and actually employed metallic rings, some of silver and zinc, and others of copper and zinc, as prophylactics against cholera. He even continued the practices of bleeding

and blistering, which he had learned in his earlier years.

He enumerates all the principal mineral remedies—mercury, arsenic, antimony, lead, copper, zinc, iron, silver, and their compounds—and tells of their use by native Indian practitioners. He employed some, if not all of them, himself; only, however, in the small doses peculiar to the Hahnemannian practice. The medicinal properties which he ascribes to many of the vegetable remedies differ more or less from the descriptions in American books, especially those of the Eclectic School. This may be explained in a great degree by the fact that much of his information, as he acknowledges, was derived from natives, and he was liable accordingly to many mistakes. It is also well known that the differences of soil and climate manifest their effects by modifying the essential properties and even the constituents of plants.

In regard to nostrums Honigberger affected no exclusiveness or ill feeling. He embraced them in his apostolic eclecticism,— to "prove all things and hold fast that which is good." Accordingly he included Morrison's and Holloway's pills, and Warburg's fever drops in his Materia Medica, and administered them in small doses.

The prominent characteristic features of the Medium System, it will be perceived, consisted in the employing of specifics, in the smallness of the dosage, and in pleasant medicines. "I am convinced," says Honigberger, "that specifics do not act mechanically, but physically, being in connection with the malady as iron with the magnet; and that not the quantity, but the quality of the remedy produces the desired effect."

The specifics which he commended were those of which he had himself tested the efficacy. He mentions the Homœopathic method of triturations long continued, and the hypothesis that electricity is thereby evolved and its properties imparted to the medicine. He does not seem to credit this notion, but declares as his own belief that fifteen to sixty minutes will be sufficient time for the triturating of the medicaments. He insists, however, that every physician ought to prepare the remedies which he prescribes. Apothecaries, he remarks, are often ignorant, and apt to make mistakes, and they sometimes have a practice of substituting other drugs for the one prescribed, while the physician is responsible for the results.

In regard to minute dosage, Honigberger defends it, because that the same medicine acts very differently according to the quantity of the dose, or the interval at which it is administered. "Therefore," says he, "since we are aware that medicines in minute doses possess peculiar properties and powers, it is our bounden duty to make ourselves acquainted with this mode of using them, and it is imperative for us to forego such notions and principles, hereditary or acquired, as are founded on prejudice. *Minute doses alone can produce medicinal action.* Properly employed, they operate beneficially, because their action is confined to that part of the body which is the seat of disease, while the remainder of the system is not attacked or weakened; if improperly employed, they cannot, from minuteness, be very injurious."

His theory of their operation was as follows: "Small particles of medicaments dissolved on the tongue by the saliva, mix with the chyle on entering the stomach, and their effect is then conveyed by the

electric or magnetic action of the nerves, to the remote parts over which they are destined specifically to operate."

Of the matter of pleasantness in the administering of medicines, Honigberger made great account. "Besides the other advantages which this [Medium] System possesses," says he, "the remedies are administered in so agreeable form that they may be taken without the consciousness that they are medicinal. This is worthy of attention, as it removes one of the many difficulties which obstruct the way of the physician in the exercise of his profession." He adds this further ingenious reasoning: "Nature, in placing at our disposal such vast stores of medicinal treasures, surely never conceived the revengeful action of punishing those who had recourse to this aid. It is more consistent with reason to suppose that they were benevolently endowed by nature with their peculiar flavor to warn us against the danger of using them too freely."

He accordingly made great use of the lozenge or tablet in his preparations. Sometimes he coated medicines with sugar, but he generally chose to mingle the remedy and sugar through the entire lozenge.

Honigberger fully appreciated the obstacles which his innovations must encounter from those who were attached to the older methods, and likewise the ingratitude which is the lot of public benefactors. To those opposing him from pecuniary interest, ignorance or prejudice, he answered with no argument but silence. Of others, however, he was more considerate. "It cannot be expected," he said, "that men should abandon their lengthy prescriptions and familiar methods, to study new ones; or that they should be

persuaded that minute doses could produce effects more salutary and more rapidly than larger ones."

He put forth no attempt to found a distinct school or party in medicine. His aim was to make his doctrines and discoveries as widely beneficial as possible, without regard to his own fame or personal advantage. He hoped that others would continue his experiments and perfect his methods. He sought in his writings, to adapt them to the understanding of every man and make them suitable for the use of families and private individuals, as well as physicians. "It often happens," he remarked, "that he who has but a slight knowledge of medicine, and understands the peculiarities of his own constitution, is able by the timely application of a suitable remedy, entirely to remove, or lessen any illness with which he may be attacked."

Having duly explained his methods and principles, Honigberger submitted them to the public attention. "If," said he, "my work meets with a favorable reception and is considered useful, I shall feel happy in having attained my most ardent wishes."

In this spirit he added his discoveries and experience to the stock of knowledge already possessed by the world, placing it there as the woman in the parable hid her leaven in the meal, to remain unregarded till the whole mass should be leavened.

CHAPTER VIII.

THE NINETEENTH CENTURY.—CONTINUED.

RADEMACHER, THE GERMAN ECLECTIC.

ANOTHER luminary in the medical sky, whom we shall regard with interest, was Johann Gottfried Rademacher. He appears to have had the career characteristic of a sage, having been carefully kept in the background and left unnoticed while living, but finding acceptance for his doctrines after he was dead. He was a pupil of Hufeland, and after he had graduated in medicine he entered into practice in the town of Goch, in Rhenish Prussia, in 1792. For twenty-one years he administered remedies and cared for his patients after the ways which he had been taught. Presently, however, his observations and experience convinced him that the current methods, though considered as scientific and regular, were not beneficial.

Paracelsus has said : " I threw myself with fervent enthusiasm on the teachers ; but when I saw that little resulted from their practice except killing, death, laming and distorting ; that the greatest number of complaints were deemed by them incurable, and that they scarcely ever administered anything but syrups, laxatives, etc., with everlasting clysters, I

determined to abandon such a miserable art, and to seek truth by some other way."

Similar to this was the course pursued by Rademacher. Being a very conscientious man, a diligent observer and investigator, with a philosophic as well as scientific temper, he engaged in earnest search for a profounder knowledge, which should reveal to him better procedures and assure him better results. He consulted the writers of the fifteenth century, and quickly perceived the meaning of their arcane expressions, and peculiar jargon, which have misled so many superficial readers and reasoners into a false understanding of the doctrines which they actually held and sought in this way to promulgate.

Rademacher explains the motive which led the alchemists to shroud their notions in an obscure terminology as being for protection. They sought thereby to shield themselves from persecution and cruel punishments at the hands of the Galenists, the "regular" physicians of the time. As the laws were then administered, the penalty of imprisonment, the torture-chamber, and even death threatened the practitioner who fell under their displeasure.

Rademacher described the alchemists as original thinkers and investigators, and as being proficient in natural science ; while the others were little else than theorizers, deriving all their opinions and professional knowledge from those who had been taught in the same way, and never venturing to depart from the established routine. He had made himself familiar with the philosophic and more advanced views of the time. He had studied diligently the works of Paracelsus, Van Helmont and Emanuel Swedenborg of whom he was a warm admirer. He was himself a

man of extensive learning, but when he became an author he followed the example of the great master, Von Hohenheim, and instead of the obscure diction and technical language so often employed, wrote in the vernacular of the common people.* This brought down upon him the ire of many of his learned friends, and induced many publishers to refuse to print his books. It is a curious whim and diverting at times, that men professing the love of learning should insist on the employing of a terminology which the common reader or hearer cannot readily understand. Acknowledging in words that education is essential to the public safety, they actually, from affectation, or a more ignoble motive, seek thus to obstruct the communicating of vital and important knowledge. They cannot be said to emulate the example of the sun who holds his seat among the brightest stars, but grudges not to bestow his light and warmth upon the humblest one that lives on the earth.

In 1814, Rademacher began his reformed practice. He was strictly eclectic in his methods and followed closely upon the principles laid down by Von Hohenheim, adopting what was proved to be healthful and discarding every baneful agent. His medicines were chiefly from the vegetable kingdom. He made the significant remark in his *Vindication*, a work published in 1848, that he might, perhaps, resort to bloodletting in organic disease of the liver and spleen, or even to the exhibition of *mercurius vivus* in *ileus*, but nevertheless, that during a practice of twenty-five years, from 1816 to 1841, he had never found it necessary. He had employed a simple and kindly treatment with

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* "Think like the wise, but use the language of the many."—ARISTOTLE.

his patients, and succeeded better than with the former methods.

Among the medicines which he employed, were cream of tartar, acetate of potassa, sulphur, Epsom salts, and various preparations of zinc and lead. He also made great use of the acetate of iron, lauding it warmly. He depended, however, very largely upon botanic remedies, and obtained with them the best results.

Unlike most of the luminaries whose works have been permitted to shed light upon the world, Rademacher was simply a practitioner of medicine in a town of modest pretensions, and not the robed professor of a metropolitan university. He was, doubtless, more accurate and certain in what he uttered, but he was likewise far less sure of a favorable introduction to public attention.

In 1841, he completed his great work, and entitled it: *A Vindication of the Art of Healing, True in Principle and Confirmed by Experience, as Taught by the Old Masters of Medicine, but now Generally Misunderstood; together with a True statement of its Practical Demonstration in Twenty-five Years of Clinic Practice.** In it he vindicated the medical doctrines of Paracelsus and his successors, and added his own contributions which had been gathered from a rich mine of experience. Thus he forcibly illustrated the inspired remark of D. A. Wasson:

"An Arabian hospitality as well to the suggestions

**Rechtfertigeng der von den Gelehrten missbekannten ver standesrechten Erfahrung sheilleher der scheidekünstigen Geheimärzte, und treue Mitteheilung des Ergebuisses einer 25-jährigen Eprabung dieser Lehre am Krankenbette; von* JOHANN GOTTFRIED RADEMACHER. Berlin: 1841, Druck und Verlog von G. Reimer. In two volumes.

of ancient tradition as to the adventure of modern thought, belongs to genius as its insuperable trust."

Rademacher was truly a man who dared follow what best accorded with his convictions. He wrought and wrote for the future. He had none of that bigotry of progress, which, from selfish interest or a fanatic devotion to that which may be about to prevail, is ready and eager to belittle all that has been.

His writings were in the popular style, giving to pedantic schoolmen their pretext for decrying his doctrines. Rademacher, however, was not only wise enough for a great effort, but wise enough for a great persistence. He whom error cannot pervert will not be harmed by it. In 1846, at the age of seventy-five, Rademacher prepared a second edition, and in 1848 a third one was published. "And the common people heard him gladly."

If often seems, when new thought or new knowledge comes to the world, that individuals remote from each other, and perhaps having no direct communication, apprehend it at the same time. It has been so with scientific discoveries. When Rademacher was engaged with his new methods and weaving them together into a coherent system, a kindred movement, the Reformed Practice of Medicine was coming into form and making ready to take rank as a distinct school in America.

THE "CHRONO-THERMAL SYSTEM."

In 1835 there was published in London a little treatise bearing the following significant title: *Fallacy of the Art of Physic as Taught in the Schools.* It was nothing less than an arraignment of the prac-

tice of bloodletting and heroic medication, which had been universal among physicians in Great Britain, Europe and America. It also propounded a new and simpler principle for the administering of remedies, under the designation of the *Chrono-Thermal System.* The author was Dr. Samuel Dickson, a native of Edinburgh, then residing at Cheltenham and actively engaged in practice. He had graduated at the University of Glasgow, and served for many years as a medical officer in India. He gave the following account of his position :

"It was my fate—I can scarcely call it my fortune—to make two most important discoveries in medicine, namely : The *periodicity of movement* of every organ and atom of all living tissues, and the *intermittency and unity* of all diseases, however named and however produced. To these I added a third : *the Unity of Action of Cause and Cure;* both of which involve change of temperature. Such is the groundwork of the *Chrono-Thermal System.*"

Dr. Dickson gives the following summary of the new doctrine :

"The phenomena of perfect health consist in the regular repetition of *alternate* motions or events ; each, like the different revolutions of the wheels of a watch, embracing a special period of time.

"2. *Disease*, under all its modifications, is, in the first place, a simple exaggeration or diminution of the amount of the same motions or events, and being *universally* alternative with a period of *comparative* health, strictly speaking, resolves itself into Fever—*remittent* or *intermittent, chronic* or *acute ;* every kind of structural disorganization, from tooth-decay to pulmonary consumption, and that decomposition of the knee-joint, familiarly known as white-swelling, being merely 'developments' in its course—tooth-consumption, lung-consumption, knee-consumption.

"3. The tendency of disorganization, usually denominated *acute* or inflammatory, differs from the *chronic* or scrofulous, in the mere amount of motion and temperature: the former, being more remarkably characteristic of excess of both, consequently exhibits a more rapid progress to decomposition or cure; while the latter approaches its respective terminations by more subdued and therefore less obvious alternations of the same action and temperature."

Dr. Dickson subscribed heartily to the maxim of Hippokrates: "*Omnium morborum unus et idem est*"—the cause of all diseases is one and the same. With a theory so simple and comprehensive it was easy to sweep into the waste-basket and garbage-box, the whole complicated, and often inconsistent classification of diseases with their multifarious names and distinctions, as frivolous and absurd.

In his explanation of his system and mode of practice, Dr. Dickson considered ague or intermittent fever as the type or model of all the maladies to which man is liable. The other forms, such as remittent or typhus fever, rheumatism, pneumonia, the exanthemata, etc., he regarded as varieties. The steps or stages are analogous in all, namely: Chills, fever, and cessation of the attack, which last is comparative health. Hence, whatever the form of the complaint, the propriety of adopting any remedial measure has, in every case, more or less relation to time and temperature. Medicines should be administered, as a general thing, during the cessation of the attack, with the view of extending this condition and preventing, or at least retarding, a new occurring of the violent symptoms of the malady.

Dr. Dickson denounced bloodletting with the vehemence of Martin Luther, or an apostle of a new

crusade. Few are the diseases he affirmed, which the loss of blood may not of itself produce. "The symptoms of Asiatic cholera are the identical symptoms of a person bleeding *slowly* away from life." Magendie mentioned pneumonia as having been occasioned by loss of blood, and all know that the functions of digestion and respiration are impeded by the same cause. More deaths were from the lancet than the lance.

He also deprecated the surgical influence that preponderates in the medical schools, and quoted the declaration of Shakspere with approval, that the art of operators had "no art in it." He added his own conviction that, "if physic were better cultivated, there could be little need for such an opprobrium in medicine as operative mutilation."

He likewise deplored the preference of English women for male over female practitioners of midwifery. He declared that it enabled persons badly educated to worm themselves into the confidence of patients, and by arts and collusion, to monopolize the entire practice of medicine. More children perish, he affirmed, by the meddlesome interference of these persons, than have ever been saved by the aid of their instruments. He quotes, with cordial approval, the memorable remark of Sir Anthony Carlisle: "The birth of a child is a natural process, and not a surgical operation."

For the Homœopathic dogmas, Dr. Dickson exhibited little patience. To the assertion of Hahnemann, that life resembles nothing that does not live, he replied that the phenomena embraced by the term resemble every thing of which our senses can take cognizance. He himself defines life as "electricity in its highest sense, even as the attraction of gravitation is electricity in its lowest sense." According to his theory

medicines exert an electric influence upon the organism; but he remarks, that they are by no means uniform in their effects upon different patients. "Like every force in nature," he declares, "our remedial powers all act by causing attraction or repulsion, and *every remedy can act both ways in different individuals.* All remedial agencies have the power of producing inverse motion; and so, in this way, they *cure* or alleviate in one case, while they *cause* or aggravate disease in another."

Hahnemann further sets forth the manner in which we may know beforehand the medicine which is the surest method of cure in each given case of disease. As soon as we have under our eyes the table of the particular morbid symptoms produced on a healthy man, it only remains for us to have recourse to mere experiments. These alone are capable, he affirms, of determining what are the medical symptoms, the symptoms produced by the medicine in the healthy subject, which always arrest and cure the like morbid symptoms (diseases) in a rapid and durable manner.

Dickson declared to the contrary, that if Hahnemann had known that every medicinal power being a repulsive force in one individual, and an attractive force in another, may act inversely in any two cases of the same disease, he would never have written this statement. Dickson then adds, that if there be a truth more sure than another in physic, it is this: "That until we have absolutely tried a medicinal agent in any given case, we can not possibly tell whether it shall be a remedy or an aggravant in that particular case. Trial and experience are your only guides. This much, however, you may, in the majority of cases of any given disease, point out: That such agents as

have generally a definite power for good or evil, over definite parts of the body, are the class from which you are to expect the most benefit in a disease of such parts ; but which of them, the experience of that case itself can only tell you.

"So far, the art of physic is, and ever will, I fear, remain imperfect."

Having thus repudiated what he denominates "the exploded doctrine of *Specifics*," or remedies which always arrest and cure certain morbid symptoms, Dickson calls in question the dogma of *Similars* in the following terms :

"The doctrine that *like cures like* was so obvious as to be a popular axiom in every age ; but it is only the minor of a major proposition, a fragment of the great Abstract Law : *Any given power applied in a particular degree, and at particular periods, may cause, cure, aggravate, or alleviate, any given form of disease, according to the constitution of the particular patient.*"

"Awful is the duel between Man and the Age in in which he lives," says Lord Bulwer-Lytton. Dr. Dickson realized this to the supreme moment. He was fiercely assailed by the medical journals, and what he termed "the organized opposition of the Schools—the Brodies, the Chambers, and the Clarks." The champions of the lancet and blood-bowl overflowed with rancor at being assured that they were in the wrong. On the Continent of Europe, the works of Dickson met with a more friendly reception. They were translated and reprinted in France, Germany, Sweden and America.

Everywhere they bore their fruit. Finally, although Dickson was a prophet achieving no honor in his own country, his methods and theories won accept-

ance. To avoid any just acknowledgment, and hide the fact of retreat and surrender, refuge was sought in that common resort of mediocrity: the statement that the type of diseases had changed. Dr. Dickson announced the result in 1845, in the following forcible language:

"The Chrono-Thermal *Principle* is denied, disguised, and plagiarized; but the Chrono-Thermal PRACTICE secretly triumphs on every hand!"

DOSIMETRIC MEDICATION.

Following closely upon the various reforms and improvements in Medical Practice, was the method known as Dosimetric Medication. It was first promulgated about the year 1860, by Dr. Burggrave, of the University of Ghent, and has since met with a very favorable reception. It has been adopted by about one-fifth of the physicians in France, and by more than ten thousand upon the Continent. It likewise obtained a foothold in Great Britain, and later in the United States. The late Dr. William Hitchman, of Liverpool, a graduate of the University of Erlangen, and former president of the British Eclectic Medical Conference, adopted it during the later years of his life; and Dr. Richards Gray gave a very complete summary of the doctrine with warm commendation, in his address to the World's Congress of Eclectic Physicians and Surgeons, at Chicago, in 1893.

The name is derived from the peculiar mode of dosage, although its advocates have a very well defined theory of pathology and therapeutics. Dr. Burggrave strenuously asserted that Dosimetry was by no means a system of medicine, but only a better

method of treating the sick. His attention was directed to the matter by observing the great mortality among the patients undergoing surgical operations in the Hospital of Ghent. About two-thirds of them died either of traumatism or of purulent infection. Later on, the antiseptic dressing of Lister was adopted, and the number fell to fifteen or twenty per cent.

Burggrave regarded the traumatic fever as due to a stoppage of blood in the capillary vessels, caused by a paralysis or fatigue of the vaso-motor nerves which control the circulation. The stagnation first produced heat and then inflammation ; and so was the origin of congestion, change of texture, and finally of lesions. He called to mind a successful treatment of intermittent fever and cholera, in Russia, by Dr. Mandt, of St. Petersburg, and tried it upon patients with fever in the hospital. Mandt employed extracts of medicinal plants, but Burggrave substituted alkaloids, such as strychnia, to give tone to the ganglionic nervous system, and veratrin and aconitine, to arrest the fever. He succeeded in bringing the mortality in the hospital to five, and even at times to two and a half per cent. He thus made the discovery that it is sometimes possible to prevent the fever, and very often to jugulate it outright.

Dr. Burggrave distinguished two periods in a disease ; the first *dynamic*, presenting only functional disturbance ; and the second, *organic*, accompanied by a change of tissue. In the first of these periods, the physician should use the most active means to jugulate the disease, or cause it to abate. From this fact Dr. Burggrave educed his rule, to give an acute attack an *acute treatment*, giving his medicines in small doses, and repeating them till the desired effect is obtained,

regardless of the quantity of medicine administered. Dr. Gray, in his Address, thus explains the principles underlying this rule of practice:

"We all agree, that wherever there is general disturbance and special disorder, the former resides in the vascular system, and the latter in some special organ. They are physiological troubles, dependent upon susceptibility, which it becomes imperative to moderate. The Medical Art consists in rendering organic lesions latent and stationary, and in causing functional disorders to cease, instead of creating a greater disorder, as in the Empirical Method. To counteract these physiological troubles, Nature has given us therapeutic agents of a general and special kind; and the Dosimetric Practice shows us how to make use of them more readily. No time is lost in waiting for the development of disease. Whether it be cerebral, thoracic, or abdominal trouble which confronts the physician, the dosimetrist attacks the presenting symptoms, and is thus enabled to anticipate organic lesions."

The peculiar mode of dosage consists in the employing of "parvules" prepared in accordance with these principles; although the various tinctures of Eclectic and Homœopathic manufacturers are used for similar purposes. The theory of Dr. Boenninghauser assumes that medicaments have affinity, not only for particular morbid conditions, but for distinct sides of the body. Due consideration is also to be had for the differences existing in each patient, as to sensitiveness, disposition and temperament. The parvules are given, one or two, every ten or fifteen minutes, till the physiological effect of "calmness" is produced.

Small dosage facilitates the absorption of the medicine, and at the same time makes it certain that the needed quantity will not be exceeded. The physician

begins with small doses, and increases in quantity and potency as the system of the patient becomes accustomed to the medicament. The Dosimetric Law is TIME: to acute diseases, a rapid treatment; and to chronic, lengthened intervals; as for example, one or two hours between doses. "In my own practice," says Dr. Gray, "alternation is the rule—one medicine night and morning; the second, either before or after meals. At times the disorder or disease may require a third, as in pneumonia, for instance. Then I usually employ Bryonia, aconite and phosphorus every half-hour, in alternation, till the symptoms are subdued; then at longer intervals. In a rheumatic diathesis, a fourth is added, each singly—either Rhus toxicodendron or Cimicifuga racemosa."

Dosimetrists affirm that the Dosimetric Method is the practice of Medicine employing the active principles of plants in small doses, mathematically measured, and scientifically adapted to the various abnormal conditions. Nevertheless, the remedies which they use are by no means, all of them, derived from the vegetable kingdom. Sepia, hepar sulphuris, phosphorus, and other agents of the Homœopathic pharmacopœia are found in the Dosimetric catalogue. "The preparation of its medicaments is as perfect," Dr. Gray declares, "as the present state of knowledge permits. Chemistry has placed within our reach powerful agents to control disease, transcending any before realized or possessed. As compared with sixty years ago, an enchanter's wand can now be waved over disordered or diseased conditions, arresting agonizing pain, and procuring for the fever-tossed invalid calm repose, without detriment to the system itself."

It will be noticed that the claims here made declare the attaining of a degree of precision and exactitude approximating actual perfection. The teachings of pathology are only of service, we are told, in so far as they explain and make clear the appearances of disorder and disease, thereby assisting clinical observation. It does not appear, however, that the distinctive views of Dosimetric practitioners vary widely, or separate them necessarily from other schools already mentioned. They appear to agree substantially with the sentiments of Rau and Hempel; and indeed, their advocates plead that they are in harmony likewise with the doctrines of the Eclectic School. There is no umpire with authority to decide the matter, nor is there occasion for judgment. The course adopted by the physicians themselves must be the criterion.

THE BIOCHEMIC SYSTEM.

Dr. Schuessler, of Oldenburg, in Germany, has the distinction of founder of the Biochemic system of therapeutics. It purports to be founded upon researches in biology, cellular pathology, spectrum analysis, minute anatomy, analytic chemistry, and kindred sciences. Schuessler connects in his work the various inorganic substances that pertain to the various tissues of the body, and deduces this fundamental principle: "The structure and vitality of the organs depend upon the presence of the necessary quantities of these organic constituents." Disease is caused by a loss or deficiency, or by an excess, of some of these constituents; and its cure is to be accomplished accordingly by making up the deficiency and restoring the chemical equilibrium of the histological elements. If the blood be deficient in iron, soda and

potassa ; the brain and nerves lacking in phosphate, the muscles in potassium, the bones in phosphate of lime ; then by this method of procedure we add the wanting elements, and the disease is cured.

Schuessler following the astrologic notion, it has been said, classified the human system in twelve departments, and devised twelve "tissue-remedies," as they are termed, to meet their respective diseased conditions. There is much plausibility in his principal theories, and they have been favorably received by many physicians, chiefly of the Homœopathic school. The tissue-remedies, it is explained, are not so much of the nature of medicines as of food for some constitutional want, "supplying the deficiency of cell-salts." This would seem to be in conformity to the declaration of Hippokrates, that it was in the dietetic needs of mankind that medicine had its origin.

HYDRO-THERAPEUTICS, OR "WATER-CURE."

The water treatment as a remedial practice, had its origin at Gräfenberg, in Austrian Silesia, about the year 1829. It had inception from an accident. Vincent Priessnitz, a farmer, having had the misfortune to break several of his ribs, found the application of water more efficacious than the lotions of the physician to relieve the sharp pains and inflammation. Following the clew thus obtained, he made use of the same treatment with excellent result in various diseases. He afterward began to administer it to his neighbors, with a success that speedily made the procedure celebrated, and caused Gräfenberg to be thronged with patients.

Lord Bulwer-Lytton also came, and his eloquent description of the treatment was widely read and

admired. Captain Claridge, having had the experience as a patient, introduced the Water-cure into England, and within a brief period sanatoriums were established there and in America.

By this time the medical authorities of Austria were in arms. Inspired by professional jealousy they instituted a legal prosecution, and procured a royal commission of enquiry. Priessnitz was made to undergo a vigorous examination; his methods were scrutinized, and even the sponges used in them were torn in pieces and subjected to chemical analysis in the hope to detect him practicing medicine surreptitiously. There was no way found open, however, to interrupt him except to prohibit the use of water for washing and in the place of drugs, a procedure which would have excited general ridicule. The attempt at interference seemed only to make Priessnitz and the water-treatment more generally known through all civilized countries.

Having thus overcome legal and professional hostility, the next stage was reached. A puerile endeavor was made to show that the Water-cure was of English origin. John Floyer, of Litchfield, it appears, had published a book in 1702, entitled: *Psychrolousia, or the History of Cold Bathing, both Ancient and Modern.* Dr. J. S. Hahn, of Silesia, followed with another in 1738, upon the *Healing Virtues of Cold Water;* and in 1797, Dr. Currie, of Liverpool, printed a third upon a broader basis, with the title of *Medical Reports on the Effects of Water as a Remedy in Fevers and Other Diseases.* The work of Dr. Hahn was republished in 1804, by Professor Oertel, and had, together with a translation of Dr. Currie's book, an extensive circulation, creating a general enthusiasm. When Priessnitz himself came

into notice at a later period, Professor Oertel was his warm and generous supporter.

In fact, despite the English claim of precedence the remedial use of water in the various modes of application had been inculcated by early writers, among whom may be enumerated Asklepiades of Prusa, Antoninus Musa, Galen, Rhasis, Avicenna and Cardan. The Silesian peasant, however, had derived his concept from none of them, but was original in his methods. He triumphed alike over the persecutors at home who had endeavored to crush him by arbitrary power, and the plagiarists abroad who sought to take from him the honor of his own discoveries.

The earlier hydropathists, following the example of Priessnitz himself, circumscribed their procedures to patients with chronic diseases, and made use only of the severer methods. Presently, in 1852, John Smedley, of Matlock, in Derbyshire, attempted a milder form, using warm as well as cold water. The new method became very popular, and to a great degree, superseded the other.

The Water-treatment has been found efficacious not only in the restoration of the body as a whole, but it has likewise been employed in local affections with like advantage. At the present time, however, it seems to be in use more generally at sanatoriums, and in surgical and other cases, as an auxiliary to other procedures, than as itself the sole remedial agent.

THE "SWEDISH MOVEMENT-CURE."

The procedure technically designated *Kinesipathy*, but popularly known as the "Movement-cure," had a somewhat romantic origin. Ling, the Skandinavian

poet, was led to it by reading of the prodigious strength of the ancient Northmen. He found that by beating a rheumatic arm, he cured the pain ; and following up the matter so suggested by a series of experiments, he brought into existence the new method.

The procedure consists in the applying of external motions, active and passive exercise to the body, and likewise in rendering these motions so special as to operate upon particular organs or parts. There are several thousand of these remedial movements, and with them are included posture, friction and percussion.

A study of the ancient classics will bring to notice that gymnastics constituted an essential part of the youthful training. To this fact must be attributed to a very great degree the extraordinary strength displayed by athletes, and indeed, quite generally at the games and other public occasions. Like methods are employed at the present time in countries not commonly ranked as civilized. The massage or shampoo, rubbing, lifting, were all borrowed from them, and are now applied with great advantage, sometimes by masseurs, sometimes by professional "rubbers," and likewise by the medical attendants themselves.

The Movement-cure was formally introduced into the United States about the year 1860, and though perhaps not so generally received as it deserves, it has proved wherever it has been employed, a valuable auxiliary to other remedial measures.

CHROMO-THERAPY, OR LIGHT-CURE.

Many years ago a curious little treatise was published anonymously in London, with the imposing

title of *The Key of the Universe.* It assumed at the outset that there must be some possible created intelligence to whom the universe interprets itself; and although not setting at nought the inductive method so much boasted of in modern times, the author asserts that there is in the human intellect a prescience which usually anticipates discoveries. He declares the Universe to be an organic structure, every part of which is dependent upon every other. He accepts the scientific hypothesis of *ether* as the primitive physical principle, including all the forces which are recognized as back of all natural phenomena. Of this ether, he regards Light as an *affinity*, and considers it to consist of force only. He adds, in illustration of the supposition: "For, since any force may become any other, and all matter being force, it follows that, in this sense, Light is as much matter as any term that precedes it in the series." Being the ether itself in that mode of manifestation, it is of the same nature in all departments of the universe. Hence, in the former world-religions, it was the symbol of all that was sacred, and believed to constitute the body of Divinity itself. Its property of magnetism determines the form and nature of minerals, and dictates the mode of growth of every plant, causing the plumule of the seed to develop upward, and the radicle, in a corresponding degree, to extend downward. Animal life is evolved likewise from the same principle.

The late General A. J. Pleasonton, of Philadelphia, made the discovery that certain rays of light influenced vegetable and animal life, hastening growth to a remarkable degree. He published a little monograph on the subject, which excited much attention

and experimenting. He denied the old theories of centripetal and centrifugal force, declaring that light was the first thing created, as declared in the book of the *Genesis*, and that from it were evolved the agencies known as heat, electricity and magnetism.

Dr. Seth Pancoast also published a little treatise, in 1877, on the same subject, and had collected material for a larger work setting forth his views upon that and associated topics. His death took place before he was able to publish the results of his work, and its future disposition is left to his son, with full discretion. Dr. Pancoast endeavored to bring the cruder notions of General Pleasonton into more philosophic and scientific form, and with a fair degree of success. He inculcated that the new theory was taught in the Bible, the Hebrew *Kabala*, and by the ancient philosophers. He declared light to be the positive force in Nature, "the source, the sustainer, the renewer of the universe and of all life therein." * All organic forms he described as being "developed to manifest light as Life;" and deduced therefrom the theory that "Light is Nature's own and only specific for disease of all kinds." Being the source of life, he declared it best calculated accordingly to prolong life by maintaining equilibrium in the organic system and restoring it when impaired by disease. "To strengthen this influence," he adds, "we have the fact that the virtues of medicines are largely received from light."

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* Dr. Pancoast thus explains the production of earthy material: "Ether is the *hylé* of the ancient philosophy. It is invisible, except when polarized. Oxygen is the positive and hydrogen the negative polarization of the ether. Water is generated by the combustion of hydrogen with oxygen, and earth is a precipitate of water." He declares accordingly, and he assured the writer personally that he had himself produced a copious precipitate from pure oxygen and hydrogen in hermetically sealed glass, and successfully confirmed the experiment by repetition.

Dr. E. D. Babbitt has also propounded a Science of Cure in which the Solar rays are employed as the principal agency, though without ignoring other therapeutic means. To the theory he gives the name of Chromopathy, or Healing by Light and Color. It involves the same principles as are enunciated by Dr. Pancoast, and he being of a less speculative temper, appears more likely to bring his methods more directly into practical application. He has devised apparatus, lenses, thermolumes and other fixtures, for the purpose of employing sunlight in various forms and shades of color, so that it may be adapted to the wants of the patient, whatever the case.

He is also familiar with the mesmeric art, massage, electro-therapeutics, as well as ordinary medication, and blends all these "finer forces" in his treatment whenever he deems it proper. This in the present state of our medical knowledge, will be of no manifest advantage.

The same properties and virtues which are in the solar ray are also found in the electric light. We learn from microscopists that water abounding with micro-organisms, of various character, noxious and innoxious, becomes freed from them upon exposure to sunlight. Further experiment has demonstrated the same fact in the case of the electric light, showing it also to be actinic. Apparatus for its employment as a therapeutic agent was on exhibition at the World's Fair, at Chicago, and received favorable notice. Whether the new therapy will supersede the common methods, it is hardly safe to predict; but there is no doubt of its utility as an auxiliary. The finer forces are, doubtless, sufficiently potent as they are properly applied.

METAPHYSICAL MEDICINE, "CHRISTIAN SCIENCE," ETC.

From the earliest periods of human history, there have been recognized modes of healing the sick, by other than the agencies in common use. It is a belief entertained by the most gifted and intelligent as well as by the less favored and ignorant. It exists with little change among many populations of the East, and is cherished by large numbers of individuals belonging to countries of the West. Hippokrates, Galen and other notables of the medical world, regarded charms and amulets as possessing healing virtue and employed them accordingly; and certain individuals were believed to exercise the power of removing disease, by touch, prophetic words, or act of will. Even among those who reject unqualifiedly all claim of marvelous gifts and faculties as being possessed and exercised by any at the present time, there are very many who tenaciously hold it as a fundamental religious truth that miraculous cures and other deeds beyond our common powers, took place at other epochs. It would come with an ill grace from such to cast opprobrium upon others for believing that an energy which had been efficacious in former ages to restore the sick and enfeebled, is still operative and successfully exercised.

The class that sneeringly decry such things as superstitious and refuse any candid consideration of their merits, virtually acknowledge apprehension that they are themselves in the wrong. It may be, likewise, that they have forgotten the fact that the term *superstition*, which they flippantly use to denote vulgar credulity once signified the superior faculty of comprehending the really true—a higher tribunal than that of willful

disbelief or judgment biased by tradition and prejudice.

Leading members of the medical profession have deprecated the crudeness of the common professional knowledge, and acknowledged the weak point in their art from not understanding the influence of mental causes to induce disease and promote health. Schiller the poet, himself declares that "a physician whose horizon is bounded by an historic knowledge of the human machine, and who can distinguish terminologically and locally the coarser wheels of the intellectual clock-work, may be, perhaps, idolized by the mob, but he will never raise the Hippocratic art above the narrow sphere of a mere bread-earning craft."

Dr. Forbes Winslow, an English physician of eminence, makes the following emphatic statement:

"The physician is daily called upon in the exercise of his profession to witness the powerful effects of mental emotion upon the material fabric. He recognises the *fact*, although he may be unable to explain the *rationale*. He perceives that mental causes induce disease, destroy life, retard recovery, and often interfere with the successful operation of the most potent remedial means exhibited for the alleviation and cure of bodily suffering. Although such influences are admitted to play an important part, either for good or for evil, I do not conceive that, as physicians, we have sufficient appreciation of their great importance."

With such conviction on the part of leaders, even materialistic in their notions of therapeutics, and the corresponding unrest and desire for better methods in all circles, we cannot wonder that there should be explorations into other fields, and even into regions often regarded as vague and visionary. Thus we observe a recurring to the old practice of simples and

vegetable remedies, so ably set forth by Nicholas Culpepper in 1650; then mesmerism entered the arena, bringing in electricity and magnetism for auxiliaries; and Homœopathy with the theory and procedures closely verging upon the spiritual. Religious teachers arose who professed to have the ancient apostolic gift to perform miracles. This was a function which the Roman Church has always recognized as still in exercise, but which the later Protestant bodies have generally ignored, as belonging to a dispensation long gone by. The psychologic revelations from mesmerized patients, and the revival of Spiritualism in a new aspect helped to turn attention toward this neglected department.

Accordingly there sprang up individuals here and there who professed to heal the sick without medicine, or else with remedies signified to them by occult means; some affirming that they were aided by superior agencies after the ways set forth in the New Testament,* and others that they operated through the faculties inherent in every person.

About the year 1840, mesmerism or animal magnetism had begun to attract notice in America. Among those experimenting in this direction was Dr. Phineas Parkhurst Quimby, of Belfast, in the state of Maine. He was expert in producing the trance, and employed the agent in the treatment of his patients. The phenomena of clairvoyance and the revelations thus obtained, led him to further researches in the department of psychology. He soon found in man, his biographer informs us, a principle or a power that was not of man himself, but was higher than man, and of

* *Mark*, ix., 23. "All things are possible to him that believeth."

which he himself could only be a medium. He also declared that he had discovered that "disease is only an *erroneous belief*," and upon this discovery he founded his method of cure. He accordingly gave up the practice of mesmerism, and the use of remedies however prescribed, and thenceforward adopted the new procedure. Of this success another writer says:

"Had he lived in a remote age or country, the wonderful facts which occurred in his practice would have now been deemed either mythical or miraculous, he seemed to reproduce the wonders of the Gospel history, etc."

About 1863, the Rev. W. F. Evans, of Claremont, in New Hampshire, a minister of the New Jerusalem Church, became a disciple of the new doctrine, and soon afterward engaged in the practice. He also published six duodecimo volumes, giving an explanation of the theory and treatment, its scientific character and harmony with the declarations of various writers of modern and ancient periods. His style is simple and attractive, and the reasoning cogent and not always easy to answer. Following the Swedenborgian rule of analogy, he declares every physiological process a correspondence, or effect of some psychologic action; and diseases a consequent of abnormal psychic or moral conditions, which may be remedied by mental operations. Nevertheless he speaks very favorably of manipulating and mesmeric passes. "All diseased conditions," he remarks, "connect us with disordered and unhappy mind in the other world. To cure disease is to 'cast out devils,' or to break our sympathetic consociation with undeveloped spirits."

Nevertheless, he does not let go of scientific knowledge. "Whatever the physiological change which is

demanded, the universal life-principle, which we call *nature*, is making an effort to effect it, and we may augment her curative endeavor by forming in our minds the idea of the change. Here knowledge is power, and refined medical science an auxiliary to the mental system of cure. And we would take occasion to remark, that no *intelligent* practitioner of the mind-cure will ignore wholly medical science. Mind is the only active principle in the universe. The mind of a skillful surgeon performs marvels in saving the lives of people."

As has been already intimated, the practitioners of this school insist that "metaphysical healing," or phrenopathy, is substantially in harmony with the teachings of the philosophers, and is essentially the method inculcated and pursued by Jesus, as set forth in the New Testament.

No claim is made by them to original conception of the idea, with regard to the theory of cure by mental influence, exerted through the imagination, or imaging faculty. The idea has existed thousands of years in the Orient. The term *metaphysical* is employed because the theory of healing thus named is based upon the laws which govern the intelligent side of human nature. It is the subjective before passing to the objective. "To know anything purely," says Sokrates, in the *Phædo*, "we must behold with the soul itself."

Although the various schools of Mental Healing appear to be based upon the same principles, they differ quite widely in theories. Among them are the disciples of Hiram E. Butler of the *Esoteric*, W. P. Phelon of the *Hermetist*, S. P. Waite, A. J. Swartz, and Mrs. Willmans. Perhaps, however, the most insistent of all are the followers of Mrs. Mary J. Eddy, of

Boston, the teacher of "Christian Science." Why this name has been selected, whether as a matter of principle or simply to attract notoriety, we do not ask. It seems to be a misnomer. The mode of treating the sick appears to be substantially identical with that of Doctors Quimby and Evans. The mode of propagandism is by the instructing of classes wherever there is opportunity, and the establishing of "Faith-Homes" in different places for patients and students. The doctrines constitute a religion as well as a secular practice of the art of healing, and several churches of "Scientists" have been formally organized, with stated services and preachers. Mrs. Eddy is very generally recognized as the spiritual leader, and several, who have revolted against her assumptions, describe her as imperious and exacting. This, however, has always been a characteristic of the prominent individuals in religious, scientific and secular enterprises, and they often persecute seceders as unworthy and culpable.

It is contemplated to procure legislation that will bring the various methods of "mind-cure," "faith-cure," "prayer-cure," etc., within the jurisdiction of the recently created medico-judicial authorities. This must naturally appear in the light of rapacity and lust of arbitrary power, without just reason. The dog that cannot eat hay, is hardly a suitable judge to sit in the manger and dictate to oxen. There are many thousands who believe in the efficacy of these modes of treatment. They find such healing described and commanded in the New Testament,* and with many of them, the doctrines have all the sanctity of a religious faith. Such legislation will be inevitably regarded

* *James*, v., 14, 15; *Matthew*, viii., 13, 16; ix., 8, 22, 35; xv., 28; xix., 2; *John*, iv., 47–53; v., 9; xiv., 12, *et passim*.

as of the nature of religious proscription, and will be included in the same category with the murderous persecutions that have made the Middle Ages infamous.

MICROBIOGENESIS AND THE GERM-THEORY.

Among the various theories promulgated in the Nineteenth Century, one of the most prominent is the Parasitic Origin of Disease. It is chiefly the outcome of microscopic explorations, and has much plausibility for its support. We remember well a statement by Addison in the *Spectator*, in which it was affirmed that every where, in the air, in every humor in the human body, and upon every green leaf, there abounded innumerable minute organisms. In 1832, when the Asiatic Cholera was extending its ravages around the globe, and had just reached America, there were many who attributed it to animalcules in the air. The conception of contagious and infectious diseases as originating from micro-organisms is, however, by no means a recent one. Kircher advanced it in the Seventeenth Century, and Liné, the botanist, gave it his countenance. Leeuwenhoek, in 1675, discovered rod-like creatures with the microscope. Nevertheless, the older theory continued to be entertained of a morbific poison acting chemically, and setting up a process of degeneration in the living tissues. About 1836, Schwann, of Germany, discovered that putrefaction was due to something in the air, which heat could destroy.

In 1849, Pollender observed little rods in the blood of animals suffering from splenic fever. Davaine pronounced them the specific virus of the disease.

About 1865, Pasteur, in France, by his researches and publications, imparted new vigor to the theory.

He taught that fermentation is always due to microscopic plants or animals, and assumed that there was a specific germ for every disease in man and animals. This would, if true, place medical practice upon another basis from any yet accepted. His greatest sensation was produced by the announcement that he had discovered the true nature of hydrophobia, and a sure method of curing it by inoculation. Dr. Robert Koch, of Germany, made a more exhaustive study of the whole subject, and developed a more complete hypothesis. Bacilli and micrococci were declared to exist for each specific complaint, and in many instances, it was proposed to cultivate or rear them, in order to be applied by inoculation as remedies and prophylactics. Others followed in the same track, till an extensive literature had been produced, and a considerable number of adherents were obtained, eagerly hailing the new theory with enthusiasm, as elevating medicine to the rank of an exact science.

Paracelsus appears to have anticipated the new doctrine, when propounding his theory of "elemental spirits." It is now promulgated and taught dogmatically, that zymotic and epidemic diseases are due to vegetable parasites of an indefinite minuteness, which gain an entrance into the body through the medium of the air, water, food, or some other way ; increasing with incredible fecundity, exhausting the strength of the individual or injuriously affecting him in some other direction. On this hypothesis, various obsolescent drugs, like mercury and antimony have been called into a new reputation as germicides, and culture-germs" for inoculation have obtained considerable notoriety. Indeed the hypothesis has almost become a dogma. Such diseases as measles, scarlatina, diph-

theria, leprosy, tuberculosis, cholera, and the long array of fevers, are enumerated as the product of the microbe tribes, bacteria, bacilli, micrococci and vibriones. Many a fine-spun theory has been drawn out, like silk from the belly of a spider, to account for the ways in which they do their deadly work. Hospitals, long notorious as hot-beds of erysipelas and septicæmia, furnished a text, as abounding with microscopic parasites. Lister gained a wide celebrity, by no means undeserved, for his devices of antiseptic agents and precautions to render surgical wounds safe from infection. His success in averting erysipelatous inflammation and hospital gangrene, must be gratefully acknowledged.

Helmholtz affirmed that vibriones from the atmosphere abounded in catarrhal and other morbid secretions. He found that they could not penetrate cotton fibre, and accordingly proposed the wearing of respiratory bags at the nostrils to be filled with it, to prevent them from being inhaled with the breath.

Unfortunately, however, they can get in by the mouth, and so the expedient never became popular.

Practitioners of eminence and extensive observation have as confidently opposed the theory. Dr. Joseph Thomas after an exhaustive review of the theory, confessed that some of the conclusions are hardly warranted by the researches, and that others seem unscientific, however much of truth may be contained in other inferences. Sir Lawson Tait was so certain of the innoxious character of the micro-organisms, that he declared himself perfectly willing, if enough of them could be obtained, to apply them to surgical wounds; Beckingham threw the gauntlet down with equal temerity. "The germ-theory," he affirmed to be

"an assumption of causes of the existence of which we have no evidence, to account for effects which they do not explain."

Dr. Bastian, professor of pathology in the London University, gave an explanation of the existence of micro-organisms that appears perfectly tenable. They are not generated in the body, he asserts, till it has become already disorganized; certainly no intelligent person would suppose that the worms that devour a putrefying carcass were the cause of the creature's death. They belong solely to the processes of decay, contributing to the promotion of corporeal disintegration.

These arguments were met by new hypotheses, resembling makeshifts by which to save a favorite theory. It was conceded that several varieties of bacteria were healthful, and that even the "comma bacillus" of Asiatic cholera was harmless till age and further development converted it into a source of infection. This is virtually conceding that the germ-theory has no substantial ground on which to stand.

Professor Henry Maudesley, however, is even more positive in his assertions. "Disease," he declares, "is not a specific morbid entity, that like some evil spirit takes possession of the body, but a condition of degeneration from healthy life." Its name depends upon the part of the body primarily affected. "Perhaps," says Mr. Wolfe, "minute animalcula may be present in different stages of decay of tissue, and are assumed to be the cause instead of the consequence." Dr. Forbes Winslow declared that "mental emotion and shock to the nerves may cause almost any disease," and adds as a curious fact: "There are medical men

who will tell you that no complaint can be caused without some subtile poison in the blood."

Such is the present stage of the controversy, and it forcibly illustrates the fact that the underlying principles of pathology are but little comprehended by many teachers and practitioners of medicine. Without doubt it will last for years to come. The dogma adopted by a generation will last till another generation appears and then pass out of sight. In another century and in a more philosophic age, it will become a theme of wonder, if not of diversion, to intelligent men.

THERAPEUTIC SARCOGNOMY.

In 1842, Dr. Joseph Rodes Buchanan, a physician of Louisville, in Kentucky, made public a theory of cerebral physiology, unique in character, yet perfectly consistent in detail, based upon investigations and speculations extending over a period of seven years. With the glowing enthusiasm of a young discoverer, he submitted it to leading medical men and scientific bodies, but only to be repulsed with scorn. A professor in the Pennsylvania University, and Dr. Forry, of the New York *Medical and Surgical Journal*, at first accepted his views, but were soon overawed by the *opprobrium medicorum*, which forcefully excludes every innovating doctrine from a candid hearing. "I soon found," said he, "that the well-disciplined army of the followers of the European system were determined not to investigate a demonstrable, but revolutionary science, and that I was as obnoxious as Harvey ever was."

Even the Phrenological societies, themselves not established inside the scientific cordon, hesitated to

receive his novelties and deductions from their system.

At this time the "American Medical Institute," for the instruction of medical students of the Independent Thomsonian School, was organized in Cincinnati, with six professorships, to open in November, 1842. Dr. Buchanan accepted the chair of Institutes of Medicine and Diagnosis; and abstracts of his papers were published in the *True Thomsonian*. The enterprise, however, did not meet with sufficient encouragement to become a permanent institution.

Dr. Buchanan now made friends with the pioneers of the American Reformed Medical Practice—Doctors Wooster Beach, Thomas V. Morrow, and their associates. The Eclectic Medical Institute of Cincinnati was incorporated by the Legislature of Ohio, and in 1846, he accepted their invitation to become Professor of the Institutes of Medicine and Medical Jurisprudence. Here he remained ten years, teaching the new doctrine with acceptance. The hostility to him was, however, made more intense. He submitted a memoir, in 1851, to the American Association for the Advancement of Science, but his adversaries procured its suppression. The Eclectic Medical Institute fell into the hands of an adverse faction, and his chair was vacated.

He attempted to present the result of his investigations to the American Medical Association, but Dr. Samuel D. Gross, of Philadelphia, advised him to seek his audience outside of the medical profession. The Association would never take any notice of any discovery that he might make or demonstrate, because its members were precluded by their caste. They were governed by it, and he was not.

This is the principal, and perhaps the only, reason

why few medical men outside the ethical cordon become recognized in scientific circles, even when their merits are of the highest order. It is the price which a sincere and conscientious man must pay for moral independence. In order to obtain a friendly, or even a fair hearing for a new doctrine, it is necessary to rear a new generation.

Dr. Buchanan for a time gave up all attempt to disseminate his views. He then resumed them, reviving his publication, the *Journal of Man*, and writing several works to explain the new system. He opened a College of Therapeutics at Boston, and lectured for several years.

His treatise on *Therapeutic Sarcognomy* presents a very full description of his peculiar doctrines and methods, He is utterly at issue with the materialism and unspiritual tendencies that characterize modern science and medical writers; and accepts, with due reservation. the animistic doctrines of Van Helmont, Stahl, John Hunter, Bichat, and others, as further developed and modified by later discovery. "The philosophical basis of Sarcognomy," he declares, "is the threefold constitution of man, and the very intimate sympathy and parallelism of soul, brain and body, which enables us, through any one of the three, to affect the other two in a corresponding manner." All forces and faculties belonging to man have their special seats in the brain, and corresponding positions in the body. "Every elementary power or tendency culminates in a certain locality."

Upon this basis, the entire superstructure is developed. In acting upon the triple combination of soul, brain and body, he teaches that in remedial procedures we may fix our attention upon any one of them,

as may appear best. The object of all treatment is the restoration of health. This is accomplished by removing from the blood all noxious or imperfectly vitalized elements, and promoting the absorption and removal of all objectionable structures, such as the tubercle of consumption, or the cells of cancerous matter, leaving the vital force to act unencumbered. More than this, however; for such is only the negative side of the matter. "After the restoration of morbid organs, and relief from morbid conditions, we should energize the faculties and organs which give the highest conditions of health." The energetic healer will not limit himself to treating the derangements of the body. One may be relieved from disease, and yet be extremely liable to falling again into depraved conditions. The permanent improvement of the constitution requires an increase of the moral power. All hygienic treatment should be ethical in tendency, and the healer should aim to leave his patient, if possible, with an exalted energy in his higher nature, which should tend to lead him into a better and healthier life.

In his proposed therapeutic revolution, Dr. Buchanan by no means favors a destructive and intolerant iconoclasm, which would discard the knowledge and achievements of the medical profession. He simply regrets its devotion to professional dignity, reputation and pedantic learning, instead of looking solely to curative means and measures, from whatever source they come. In his own procedures he incorporates them all, seeking to apply them according to the principles which he maintains. Animal magnetism, massage or mechano-therapy, electro-therapeutics, hygiene and drugs, are all employed. Although

not subscribing to the hypotheses of Metaphysical Medicine, in regard to the unreality of disease, etc., he approves of many of the methods. Of course, all are modified and subordinated to the theory of Sarcognomy. He enumerates patients who were successfully treated on the principles set forth; among them, the late Secretary Seward and Thurlow Weed, well known in American politics. Among the examples of diseases cured are paralysis, nervous shock, deafness, various diseases of vision, spinal meningitis, neuralgia, rheumatism, lumbago, asthma, continued fever, peritonitis, puerperal fever, inflammation of the female organism, cancer, Bright's disease, cholera, etc.

Whether the doctrine of Therapeutics, as taught by Dr. Buchanan, shall ever be generally received, it is deserving of candid and careful examination. Its expositor may be considered somewhat visionary, and even dogmatical; but he must be recognized as a scholar of superior attainments, conscientious in his investigations, sincere and earnest, possessing the principal qualities of a reformer. He has certainly penetrated to a field of thought and knowledge in a department that has been too much overlooked, and farther than has been currently acknowledged as scientific. Perhaps another generation may arouse from its apathy and sensualism, and give that attention to the subject which its intrinsic importance deserves.

MEDICINE IN THE OUTER WORLD.

INDIA.—Two classes of physicians have long divided the medical practice of Hindustan. The *hakhams*, or "wise men," are the Moslem practitioners, and the *pundits*, or "scholars," the Indian. Their professional

knowledge is largely from traditional origin ; that of the former class being from the Arabian universities of the Middle Ages, and the latter class professing to derive their authority from the works of Charaka, and other writers of acknowledged orthodoxy. Many of their procedures would be regarded with contempt by Western physicians, yet such superciliousness can hardly be a characteristic of really superior intelligence. These hakhims and pundits have much knowledge that is worthy of candid attention. Dr. Honigberger, who spent many years in India, admitted the theoretic information which the native surgeons and oculists possessed, although he denied their skill. They adhere tenaciously to the peculiar practices which were in fashion not long ago in Europe, making use of amulets, charms and religious incantations ; and many of them are experts in mesmerism. Some of them know how to fortify the body against the bite of venomous serpents.

There are many other races in India, however, than Hindus and Mughals, but they are generally to be relegated to the category of uncivilized nations.

Many of the discoveries in medicine and remedies which were introduced into Europe during the Middle Ages, had been already known in the East, giving credibility to the surmise that they had been kept secret, like religious Mysteries. Yet even in our own time and in our own country, it is a practice by no means uncommon for physicians and apothecaries of the old school of practice to put forth and palm off remedies as having been discovered and introduced by themselves, although perfectly aware that the same articles and preparations had been known and used by practitioners of another school. The Materia Medica

has been greatly enriched by this mode of procedure, which seems to be considered as more ethical than if any honorable ackowledgment had been rendered.

Long before Berenger de Carpi ever lived, the physicians of India had employed mercury in their practice, making use of calomel for syphilis and mercurius vivus, or corrosive sublimate, for pneumonia. The hakhams had antimony, and the natives were familiar with arsenic as a remedy. There were likewise other mineral drugs in common use.

There is an extensive Medical Flora in the vast peninsula. Some of the plants are of the same species as those of Europe and America; others of the same genera, but different species, while by far the greater number are known only in India. Indeed, the country itself seems to belong to a former geologic period, and not only its fauna and flora, but even many of its human tribes, pertain largely to prehistoric time. American Eclectics will be interested to learn that a species of Podophyllum grows in Kashmir, and is used for purposes like those of its western congener. Capsicum is abundant, but serves principally as a condiment for food. Such remedies as Xanthoxylum aromaticum, Taraxacum, Caulophyllum, Menispermum, Hyoscyamus, Crocus, Calamus, Uva ursi, Rhododendron, Rhamnus, Nepeta,—all of which are official in India—almost exhibit the veteran physicians of the Farther East ready to join hands with the practitioners of the New School of American Medicine. There are likewise native medicinal plants like those which are indigenous in India, but not known elsewhere.

Nostrums and proprietary medicines are as abundant there as in western countries. They are often

characterized by the prodigious number of ingredients. Aphrodisiacs are in great demand. This is a peculiarity of all Asiatic countries. The populations of the remoter East are as fond of swallowing medicines for imaginary ailments as the inhabitants of other regions of the earth.

Burma.—The Burmese have an elaborate, if not recondite theory of disease, which is very curious and full of interest. It is evidently derived from the theosophic beliefs of Aryan India. Their sages describe the human body as composed of five primal elements or principles, anciently enumerated as earth, caloric, water, air, and the mystic æther or *akasha*. They teach that upon each day of the week one of these elements is preponderant, and that there is accordingly a liability to some specific form of disease. They also insist that every disease must have a distinct treatment peculiar to itself. Among the remedial agents they make use of unctions, cathartics and astringents. They likewise employ lime-juice, lime water, cassia, calamus, tamarind, cocoanut,—also sugar, plumbago, camphor, cinnamon, croton oil, agnus castus. Their materia medica, it is plain, was taken from that of western India.

There are several forms of illness, the physicians declare, for which no medicine should be administered. Prolonged sickness, and perhaps death, they declare, would be the consequence. It is accordingly made the duty of the medical practitioner to learn the exact symptoms and nature of the disease, before he attempts to treat it with medicines.

They also have elaborate theories of the various disorders. For example, they represent small-pox as

having seven distinct types.* One of them appears to be the disorder elsewhere known as "prickly heat."

Although they make great account of lime-juice, which, indeed, is almost specific for small-pox, as well as other exanthematous diseases, it is said that they give very small encouragement of being able to effect a cure of the complaint. This may be on account of the defective hygienic provision made for patients, superadded to the discouraging prognosis; or it may be that our information, which has been derived from unfriendly sources, has not given us a correct statement. The Burmese have practiced inoculation from very early times.

"They have a very curious and recondite theory of gynæcology. They suppose that at the climacteric periods of puberty and the menopause, women have an excess of the elementary principle of water; and that during the middle period the calorific principle is in the ascendant. When nursing infants are ill, the medicines are administered to the mother. Midwifery is never practiced by men except when the Burmese regular treatment fails. A woman dying in childbed is believed to be impure and therefore incapable of the *nirvana*, or state of bliss. Hence in cases of mortal peril, the hated foreign accoucheur is called upon, as a lesser calamity.

Patients under ten years of age are never treated with hot medicines or stimulating food. With individuals over fifty the same rule is observed. In adults, it is required that the medicine shall be

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* This seems to be somewhat in harmony with Miss Florence Nightingale's statement: "I have seen small-pox growing up in first specimen, when it could not, by any possibility, have been caught. Nay, more; I have seen diseases begin, grow up, and pass into one another."

mild and the food nutritious. During the period of adult life, hot medicine and heating food in moderation are employed. To patients over ninety no medicine whatever is administered, but food of a delicate character is prescribed. Nonagenarians are by no means uncommon in Burma. This shows beyond dispute that the ways of living in that country, however objectionable they may appear to us, are by no means to be decried as so very inferior to those of the occidental world.

China.—The Healing Art as practiced in China is not well comprehended by foreigners, and the leading men of that country insist that it has not been intelligently, or even fairly, described. This charge is very likely to be well founded. It has long been the custom in Europe and America to defame and depreciate whatever existed among other people. Scientists and others of more pretension habitually decry what they do not understand, and malign whatever is a departure or at variance from prescribed belief and routine. Sneers are employed in such cases as being more influential than reasoning.

The Chinese have been accused of various forms of vice, even to the disgusting practices which have been common in Western Asia for thousands of years, engendering there the most foul and deadly plagues. Later and more impartial evidence, however, shows them to be as moral as Europeans, if not more so. They are certainly more peaceable; they do not find war to be necessary every few years, and they have suffered their country to be overrun, as by the archaic Khitans (Hittites) and modern Mantshus, and even subjected, because of their non-resistant proclivities.

Their diseases, like those of other countries, are largely due to unwholesome diet and personal habits. Synochus, rheumatism and intermittent fever prevail everywhere. They suffer from dyspepsia like the Americans, and are afflicted with diseases of the eyes as badly as Egyptians. Leukokythæmia is frequent among them, with enlargement and hardening of the spleen; and stricture of the œsophagus is not uncommon. Skin-diseases are numerous; and yet, while measles and small-pox are frequent, scarlet fever, which is many times more deadly, is said to occur but rarely.

China abounds with physicians, and their theories of medicine, like those of the medical writers of Mediæval Europe, are largely based upon their metaphysics. They teach the existence of the *Yin* and the *Yanh*—energy and potency, the active and passive principles of the universe, and so govern their remedial procedures accordingly. They take great account of the pulse, and like the hakhams of Moslem countries, and some occidentals, make great parade over examining it. Like the Burmese, they believe in the Five Principles, and build their pathologic theories upon the notion of the undue influence of some one or more of them.

The mineral drugs which for a few of the later centuries have been so popular with European and American practitioners, such as mercury, lead, copper, and arsenic, have been in vogue with Chinese physicians for ages. Probably the first knowledge of these agents as medicines was obtained from them. Many coincidences form this supposition, as they were adopted in Europe soon after exploring expeditions had returned from the East. Chinese practitioners

themselves, however, use gentler and more certain remedies. They commonly prescribe medicines belonging to the animal and vegetable kingdoms, and hold in high esteem such articles as gentian, oil of sandal-wood, prickly-ash and ginseng. They have made use of acupuncture from time immemorial. They also make use of the "witch-herbs" so much employed in the Middle Ages to produce catalepsy, trances, and clairvoyant visions, in which category were used hemp, the poppy, henbane, nightshade and stramonium. Their great use of opium seems to have been prompted by the fact that opium-smoking had been found to be prophylactic for pulmonary and bronchial disorders. The Christian converts in China and the islands of the Pacific Ocean are greatly subject to such afflictions. The abandoning of opium and the changes of the modes of dress are probably the occasions of this.

The medical formulas employed by Chinese physicians exceed twelve thousand. Among other things they make use of various excretory and other noisome substances, many of which, not excluding the most filthy and repulsive, had their place likewise in English and European pharmacy. In this matter it would come with a very ill grace for the Occidental pot to criticise the soot upon the Oriental kettle. Indeed, dead cockroaches are still imported into America from Russia; cobwebs are objects of medical study, and some Homœopathic investigators have proposed the virus of the filthiest and most venomous ulcers to be added to the list of remedies. The Chinese brews can be no worse; besides which, copying from China is an old practice. The fee of a Chinese physician, however, is but a few cents; and

in that essential matter the Western practitioners have changed.

So long as there is hope for the patient, the due amount of effort is put forth in his behalf. Not only are medicines diligently administered, but the friends are zealous in their endeavors to placate the spiritual beings that they believe to have power in the case. They regard diseases and casualties as having a supernatural origin. Hence a Chinaman will not attempt to rescue a drowning person, or even to treat a bodily disorder after it has passed a certain stage. He would consider it as improper interfering with the designs of the Supernatural Powers.

Magic arts, charms and amulets are believed to transmit a healing virtue. The means known to us as clairvoyance, "mind-cure," "faith-cure," "prayer-cure," have been employed in China from remote antiquity.

JAPAN.—The description given of the medical art in China applies very closely to its condition in Japan. The former relations with China and Korea were very intimate, and as a result, the literature, arts and religion of the "Celestial Empire" were transplanted into the "country of the gods." Japan abounds with medicinal plants, and the native physicians are very skillful in their use. They also have much deftness in surgery. Acupuncture, the discovery of an Eclectic physician, has been a familiar matter in Japan and China for many centuries. They also make use of occult arts to remove disease, as well as prayer, charms and amulets. In earlier centuries Japanese physicians had a pharmacy and therapeutics of their own. After the country became a Chinese colony

other methods were employed. About 1552 the Spaniards and Portuguese introduced European physicians, who established colleges and hospitals. After their expulsion the methods of the Chinese school were revived. Finally, in 1824, Dr. Van Siebold began practice at Nagasaki after modern European usages. In 1849, vaccination was introduced and afterward made compulsory. The European medical machinery is now in full operation ; schools, hospitals, dispensaries, societies, libraries and museums, and a national pharmacopæia. The result is an excelling in surgery, ophthalmic practice and dentistry. The nobility and the larger part of the population, however, adhere to the former modes of medication and are described as eclectic in their methods.

Korea.—The population of the "Hermit Kingdom," appears to have been of Dravida origin, but Chinese literature and institutions are in the ascendant. There is high regard paid to learning, and all students are required to pass Boards of Examiners, before engaging in any profession. Of course, money stealthily paid to the examiners very frequently assures the successful result. There are two branches of the medical profession, one for the royal service and another for the people. In detail, medical practice in Korea is not widely distinct from that of China.

Indeed, in the principal countries of Eastern Asia, the healing art has been esteemed as belonging to the province of religion. Evil and unfriendly spiritual beings were regarded as the chief agents in producing disease. The "elemental spirits" described by Paracelsus may be traced in the current beliefs of the Oriental peoples ; and perhaps also their counter-

parts, the microbes, micrococci, bacilli and other animalcules, which have been introduced to notice by later explorers and brought forward to the sanctities of scientific baptism. It was supposed that the clippings of the hair and nails, and even the refuse of the food afforded niduses and receptacles for these malign operators to employ for the purpose of the inflicting of maladies. Hence every remedial device had regard to such beliefs. Counter-charms were in general use. Every body had a totem, amulet, or talisman to protect from the mysterous assailants. The Northern Asiatic races have their Shamans or sorcerers, to whom they resort to counteract disease by occult medicines and ceremonies. The Chinese, Thibetans and other savage people of Austral Asia attempt to provide against disease and obnoxious spiritual infestations by burning the food left uneaten at a repast, as well as the exuviæ of their bodies. Even at the ancient Israelitish festivals and sacrifices, the Mosaic statute required a similar procedure with the fat of animals and the uneaten flesh.*

Among the uncultured tribes some of the practices are very absurd, sometimes pitiful, and sometimes almost ludicrous. The *couvade* must be included in the latter category. When a child was born the father takes the place of the mother and receives the attentions and coddling incident to the occasion. Marco Polo found this custom in Yunnan, a southwestern province of the Chinese dominions, and other writers describe it as prevailing in other "Turanian" populations and in distant regions of the globe. Lubbock treats of it as existing among the Basques of Spain. It was regarded by the natives of Africa and South America

* *Exodus* xix., 10; xxii. 18; xxxiv., 25.

as a sacred rite. It had its origin, probably, in the antique notion that the father is the sole author of the child's existence, and that the child is accordingly in some occult manner vitally dependent upon the condition of his health. Every excess and other infraction of hygienic rules are therefore strictly prohibited during the period of couvade, and if any misfortune should occur to the infant, the father and not the mother, would be held to be blameworthy.

The belief in obsession as the cause of death and disease has been entertained by every people. Our own ancestors in England and Europe, and the earlier colonists of New England, New York and the Southern colonies, hanged men and women on the charge of disordering individuals by *voudou*, and other occult acts. The trial by ordeal was an expedient to detect persons who were supposed to be thus guilty.

Always the same notion prevailed, in one form or another, that supernatural forces, evil demons, elemental spirits, pervading noxious and refuse substances, were the causes of calamities to individuals and communities ; and thus exorcisms, incantations, prayers, magic plants, and finally, Medean preparations, were employed to deliver the afflicted from their toils and malign operation.

Perhaps, in these "superstitions," as they are sometimes termed, there are more germs of truth than we are ready at first glance to perceive. The influence of mental conditions to disturb the bodily health, or to restore it, is well known to be a powerful factor in medical practice. The virtues of drugs are beyond the province of chemistry to ascertain, yet they are directly associated with the vital energies of medicinal plants and the magnetic conditions of the sub-

stances. It matters little whether we term these things "spirits," "forces," "properties," or some other cunningly-devised appellation. We may seek to evade the matter by plausible explanations or equivocations, yet we shall inevitably be brought back to the starting point. The Medical Art began with such a belief in mystic and occult principles, and it has not yet gone a great distance further. In the present state of medical knowledge, it will be well, therefore, to withhold sneers, and to cultivate with assiduity the faculty of veneration—which is, after all, the true master-key of knowledge.

CHAPTER IX.

EVOLUTION OF THE AMERICAN PRACTICE.

RING IN THE NEW!

"THERE are epochs in the history of the human race," says Lamartine, "when the decayed branches fall from the tree of humanity, and when institutions grown old and exhausted leave space for fresh institutions full of sap, which renew the youth and recast the ideas of a people."

The Eighteenth Century had passed its meridian and waned into its afternoon, when the subject-colonies of Great Britain in the Western Hemisphere discarded the old relations and set out upon their new career of independent commonwealths. No more should there be a King with his nobles and Churchmen to command their action. The reign of sceptre, belt and crosier, they decreed, must give way to government of the People, by the People, for the People. Thenceforth Religion, no longer in the meshes of unholy alliance with the secular powers, was exalted to a higher seat in the individual conscience. Knowledge, no more to be esteemed an exclusive possession of privileged persons, was made the partaker of a like consecration to the common good. The People, now baptized in the fire and spirit of liberty, began to prove their new-found strength in directions where they had before been arbitrarily forbidden.

The new impulse pervaded the Art of Healing. Heretofore this had taken form in every country in accordance with antique custom. Europe had followed in the wake of Asia, and her schools took their first instruction from the Universities of the Jew and Muslim. The medical art was overshadowed by scholastic subtleties, and embraced doctrines now set aside as vague and visionary. Presently other schools and methods came into notice, often in rivalship, if not open hostility to one another. Thomas Jefferson, writing to Doctor Wistar, declared that he had seen the various schools and theories of medicine, "disciples of Hoffman, Boerhaave, Stahl, Cullen and Brown, succeed each other like the shifting figures of the magic lantern; and their fancies, like the dresses of the annual doll-babies from Paris, becoming, from their novelty, the vogue of the day and yielding to the next novelty their ephemeral favors."

The culmination in every country had been the establishing of a professional hierarchy analogous to a National Church, domineering in its spirit and intolerant of diversity of opinion; and the inevitable consequence was an intellectual stagnation, from being protected too much. There was an accumulation of literature abounding with an ostentatious display of Latin and Greek terminology, and little improvement in medication or procedures. "In two thousand years," says *Lacon*, "the result of all their discoveries is that brimstone and mercury are the only two specifics; diseases remain what they ever were."

The methods of the Old World were assiduously engrafted upon the medical practice and legislation of the New. The old Man of the Sea upon the

shoulders of Sinbad the Sailor fastened not more tightly to his captive. The consequences were often most deplorable ; death on the pale horse and hadæan misery followed in the wake of the procession.

At length the attention of the leading public men and teachers was aroused to the insufficiency and destructive character of the current medical treatment. Benjamin Rush, a student of William Cullen and a supporter of Brown, did not hesitate to declare that the very theory and practice of medicine which Philadelphia had adopted from Great Britain, to disseminate over America, had proved a dismal failure. He also confessed that the physicians themselves were ignorant of disease and the proper remedies, and that the remedies which were employed did not possess the proper efficacy.

He went farther. Having subscribed his name in 1776 to the Declaration of American Independence, and thus declared himself in favor of impartial freedom, he began the Nineteenth Century with this memorable protest against medical legislation.

"Conferring exclusive privileges upon Bodies of Physicians, and forbidding men of equal talents and knowledge from practicing medicine within certain districts of cities and countries, are Inquisitions—however sanctioned by ancient charters and names—serving as the BASTILES of our profession."

Such was the warning from the highest medical authority of his day, in America. To it he added his woful confession : "We have assisted in multiplying diseases, and increased their mortality."

The large catalogue of complaints, classified and curiously arranged in modern nosologic mortuary records, abundantly confirm this declaration of impo-

tency. It was certainly high time to wrest the lancet from the hands of physicians, and to consign it to rust and oblivion. More urgent was the necessity to raise up a new generation of practitioners who would bring forth its legitimate fruits. Every intelligent community must always demand a therapeutic art which is at once benign and efficacious, a method which is both merciful and certain, worthy of the enthusiasm of the prophet and the unflagging zeal of the apostle.

Why, the question may pertinently be asked, why may we not have such, as an American School of Medicine? We must realize the wants of our own time, and employ intelligently the means for satisfying them. In doing this, it is by no means necessary to break abruptly or violently with the Past, but only to refuse to be in servile subjection to it. We can hold aloof from former procedures and doctrines, purely because they are inadequate, because they have not only failed of approval with the more sensible among non-professional men, but also have been weighed by the most eminent of medical teachers and practitioners, and by them found wanting. We are abundantly warranted in pleading for the American Practice, because its methods, and its assortment of remedies, better meet our requirements, and because the latter are supplied chiefly from the Flora, the medicinal waters, and innumerable resources of the Western Hemisphere. But, aside from these advantages, we may contend for it for reasons which will commend themselves to every American patriot, and every lover of his race; because it is the Medical Practice most in harmony with liberal knowledge, with the spirit of broad investigation, and with the sound principles of Human Freedom. It had its in-

ception in these, and side by side with them it must run its career.

THE HEALING ART IN THE COLONIAL PERIOD.

The practice of Medicine in America, during the colonial period, was simple and unpretentious. The facilities afforded to the medical student for learning the art consisted chiefly in familiar association with rural practitioners, the observing of their procedures, and a diligent prosecuting of such opportunities as the country afforded. Individuals of an inquiring habit of mind, persons skilled in woodcraft, and expert housewives, learned the use of the medicinal plants growing in the forests and neglected fields. Much invaluable knowledge was acquired in this way. The natives also possessed many important medical secrets. All these were treasured up in families and communicated to the various members. Pamphlets were printed to disseminate such information, and to explain certain procedures which had been found salutary in the treating of the sick. Much of this knowledge has been preserved and cultivated, but much has unfortunately been lost.

A physician, well grounded in the traditions of the former period,* enumerates many of the remedies then employed from the vegetable kingdom, giving them their common, unpretentious names of "yellow dock, sarsaparilla, wintergreen, birch bark, elecampane, comfrey, sassafras, plantain, whitewood, dandelion, snake-root, hardhack, horse-radish, peppermint, spearmint, red peppers, Indian tobacco, wormwood, tansy, yarrow, star-grass, marsh-mallow, Indian hemp

* Dr. Rufus W. Griswold, of Rocky Hill, Connecticut.

[*Apocynum*], wild ginger, mullein, pink-root, nightshade, barberry, sweet flag, catnip, wormseed, golden thread, dogwood, skunk-cabbage, bittersweet, slippery elm, boneset or thoroughwort, blue gentian, crane's bill, pennyroyal, frostwort, henbane, blue flag, butternut-bark, juniper berries, burdock, wild-cherry bark, flaxseed, pumpkin seeds, parsley-root, May-apple, black alder, elder-berries, white-oak bark, sumach berries, rosemary, blackberry-root, willow-bark, sage, blood-root, skullcap, seneca [*Polygala*], mustard, golden rod, queen's root, stramonium seeds, uva ursi, valerian [*Cypripedium*], hellebore, prickly ash, touchwood, agrimony, sweet fern, mandrake, marjoram, colt's foot [*Tussilago*], mistletoe, Peruvian bark."

The treatise upon Herbal Medicine, by the celebrated Nicholas Culpepper, was known to the more intelligent practitioners. It bore the title of *The English Physician—Enlarged*, and its title page bore the quaint description : "A Compleat Method of Physick, whereby a Man may preserve his Body in Health or Cure himself, being sick, with sucn things only as grow in England, they being most fit for English Bodies." This edition of the work was published in 1704, and contained accounts of three hundred and sixty-nine plants, setting forth their astrologic,* as well as remedial character. We find many of them at the present time equally common in America, and frequently in use as medicines. Among them are, agrimony, avens, bittersweet, nightshade, gentian, flower-de-luce, cleavers, comfrey, pennyroyal, dande-

* "If we knew all the qualities of the stars," says Dr. Franz Hartmann, "we would find that the quality of each of them is represented on the earth by some plant." This was the doctrine taught in the universities of Europe during the Middle Ages. Paracelsus actually classified his remedies under the head of the seven planets, and many of them are now used in the same way as he directed.

lion, mullein, poplar bark, willow, catmint, thoroughwort, eyebright. Quaint and antique as the work may be, it contains much information of great utility.

Every doctor had his favorite medicines, pills, and other preparations, and he often kept their composition a secret. Some of them were very crude, and their efficacy would seem to us now as depending very much upon the credulity of both physician and patient, to be even tolerated. They remind us of the old Warburg Tincture, or rather of the ingredients resembling those of the former pharmacy, which we find enumerated as elements of the brew in the cauldron of the Urd Sisters, in the tragedy of Macbeth. There was little pretense of medical ethics in the former centuries, but the same opprobrium that was lavished upon dissenters and heretics in religious communities, was bestowed with like intensity of hatred by medical men upon those who did not follow their procedures.

The clergy of the American colonies sometimes united medical practice with their pastoral duties, thus ministering to mind and body alike, and perhaps to equal advantage. Many of the governors and other magistrates, also prescribed for the maladies of their neighbors. Mothers of families, and the maiden aunts abounding in Yankeedom, took charge of their own households, and attended to others who desired their help. They had almost exclusive direction of the obstetric art. Physicians were sparse, and were chiefly consulted in extraordinary emergencies.

Surgical skill was extremely rare. Here and there were individuals of little technical acquirement, but possessed of tact and ingenuity, for operative procedures. A practitioner of this class in New Hamp-

shire, by the name of Kittredge, has been already named. He reduced fractures and dislocations with wonderful skill. Also Captain Benoni Sweet, of Rhode Island, and his descendants were equally distinguished. The members of this family exhibited deftness in this direction, almost intuitive, and accompanied by corresponding results. In other respects they were not so wonderful, and indeed, several of them incurred the imputation of charlatanry. They were characterized by the fault unpardonable in the unwritten code of New England, unthrift. Their services were in requisition during the Indian and Revolutionary wars.

Technical instruction during the colonial period, and indeed for many years of the Nineteenth Century, was very meagre and superficial. Libraries were always small, and there was comparatively little to be learned from the books. The medical student, as a general custom, attended his preceptor, and acquired from him a knowledge of the medicines and procedures which he was himself to employ. After several seasons, he ventured to begin professional work on his own account. It is probably not more than just to remark, that as practitioners, the average American physicians thus educated were not inferior to their brethren beyond the Atlantic ocean. Indeed, one of their successors affirms that their patients with acute diseases recovered in a proportion as large as similar patients get well at the present time. It must be added in further justice that these statements should be confined to one school of practitioners. Better success attends the others.

They let blood as zealously as Sangrado of old, and actually attributed to this operation whatever recoveries took place. Pringle, who flourished in the fore-

part of the Eighteenth Century, quoted Sydenham, Boerhaave and Bellini, in favor of this exhaustive depletion; Rush and his contemporaries followed Pringle. The doctrine which Cervantes had in jest imputed to his physician, was promulgated in sober earnest. As late as 1841, Dr. Sleigt, a physician of Philadelphia, while holding a public discussion, asserted that five-sixths of the blood was superfluous, and being loaded with the seeds of disease, it was better to discharge it from the body. So they bled for every thing pretty much alike, for fever, pregnancy, consumption, even attempting it for Asiatic cholera. In many communities, individuals had become enthusiastic to be bled periodically, as their descendants did to be vaccinated.

This state of sentiment continued till past the middle of the century. By this time the new-coming physicians of the several schools had succeeded in changing the popular sentiment, and compelled a suspension of the prevailing practice.* The lancet was reluctantly surrendered. In order to cover the retreat, the plea was put forth that the type of diseases had changed. The real truth, however, was that there was a different type of patients. Yet the desire to resuscitate the practice of blood-letting appears above the surface every little while, as may be perceived from utterances by leading men like Bowditch,

* It was a maxim of Broussais: "Bleed the patient till he is white." In 1832, the French soldiers and colonists of Algeria suffered a fearful mortality. At Bona, out of five thousand men, eleven hundred died—two out of every seven in the hospital. Dr. Maillat, of Paris, was then placed in charge. His observation convinced him that the fatality was due to venesection. He made many experiments, finally substituting quinia. The mortality was reduced to one in forty-six. He then promulgated the new quinine treatment, and had the satisfaction of seeing it adopted in France thirty years after. The present excessive use of this drug in America may be, like the women's fashions, a style adopted from Paris.

Flint, Fordyce Barker and Jacobi. Revolutions in countries, however, and in popular sentiment, are followed by a partial return near the former points in the circle; and the hope is now cherished that by aid of legislation, the former supremacy will be again established and a revival enabled of the practice of blood-letting. This may all be possible, but it seems hardly probable, even then, that individuals of common intelligence will be induced to believe that their blood is in any degree superfluous. A new theory must thus be devised, and it can not last long.

The attempt had been made, as has been already mentioned, to introduce technical instruction from the Old World. The medical practitioners of Europe were then divided into schools reflecting the doctrines of Cullen, Hoffmann, Stahl and Boerhaave. The sentiment most current in England very naturally had the preference. William Hunter came from London and delivered several courses of lectures, but received little encouragement. Other endeavors had little more success. The physicians of the colonies being mostly self-taught men, were attached to their own notions and methods, and hardly willing to accept the views of others, however eminent their reputation. They were probably equal as practitioners to their trans-Atlantic contemporaries. They were, all of them, graphically described by the Rev. John Wesley in terms by no means flattering, but in most respects over-true.

"As theories increased," says he, "simple medicines were more and more disregarded and disused; till in a course of years the greater part of them were forgotten, at least in the more polished nations. In the room of these, abundance of new ones were intro-

duced by reasoning, speculative men ; and those more and more remote from common observation. Hence, rules for the application of them, and medical books, were immensely multiplied ; till at length, Physic became an abstruse science, quite out of the reach of ordinary men. Physicians now began to be held in admiration, as persons who were something more than human. And profit attended their employ, as well as honor ; so that they had now two weighty reasons for keeping the bulk of mankind at a distance, that they might not pry into the mysteries of their profession. To this end they increased those difficulties by design, which were in a manner by accident. *They filled their writings with abundance of technical terms utterly unintelligible to plain men.*"

Under such a condition of matters, physicians were justly criticized for their deplorable ignorance of disease, its treatment and proper remedies; and members of their own fraternity were loudest in condemnation. Patients undergoing their treatment were often hopelessly crippled, and the sick room was a veritable torture-chamber.*

It was plain at the beginning of the Nineteenth Century that a new mode of practice was a leading want of the time. The instinct of self-preservation forbade imperatively that Americans should longer be dominated by the kaleidoscopic dogmas and the destructive forms of treatment extant in Europe ; and at the same time it demanded of them not to submit to a system of medical procedure here at home which its leading expositors almost unanimously acknowl-

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* Captain James Riley, of Middletown, Connecticut, who was shipwrecked in 1815, and enslaved for a time by the Tuaregs of the Sahara, declared afterward that his sufferings and privations in the African Desert were not to be compared with what he underwent from medical men to little benefit. He finally became a Thomsonian and treated himself with success, recovering his health.

edged to be flagrantly at fault, declaring its "facts" to be so many lies.

Thomas Jefferson had the fullest warrant for his sweeping utterance: "I believe we may safely affirm that the inexperienced and presumptuous herd of medical tyros let loose upon the world destroys more lives than all the Robin Hoods, Cartouches and Macheaths do in a century."

With such convictions as these, supported by personal observation and the voluntary confessions of the leading medical writers of the time, the great Father of American republicanism, put forth the memorable prediction, the Earnest of a New Practice of Medicine to spring up in America, which should supersede the pernicious European systems, and be unlike them—actually conservative of life and restorative to health. "I hope and believe," said he "that it is from this side of the Atlantic that Europe, which has taught us so many useful things, will be led into sound principles in this branch of science, the most important of all, to which we commit the care of health and life."

What Jefferson thus foreshadowed, the builders of the American Practice of Medicine, every one in his own sphere and place of activity, have striven to realize.

THE EARLY BOTANIC MEDICAL PRACTICE.

The origins of the American Practice of Medicine were as humble as those described of Christianity itself, as well as of every beneficial movement, and are as difficult to ascertain with strict historic accuracy. It was a time when communication between distant places was far from easy, and when facilities for liberal instruction were few. Except in the cities

and more populous districts, organization for mutual improvement, or even for defense against persecution, was very hard to effect. Every practitioner of reformatory views, like the famous Harry Wynd, of Scottish story, "fought for his own hand." If he should have been asked to describe diseases or to give his reasons learnedly for his mode of treatment, he would very probably have been compelled to answer in terms like those of Talbot, the introducer of Peruvian bark : "A fever is something which I cannot define, but which I can cure ; whilst you, perhaps, may be able to define but cannot cure it."

The belief was general, as recognized by Culpepper and others, that every region of the earth produced indigenous medicinal plants that were ample for the cure of the diseases there prevalent. The experience of the early colonists of America, as has been already shown, appeared to verify the notion. It was known that the native tribes possessed the knowledge of such plants, and that they employed them successfully. White men occasionally, who had been suffering from ailments or injuries that baffled the current medical skill, were successfully cured with their simple concoctions.

Thus the belief became widely entertained that the aboriginal tribes of the American forest were possessed of extraordinary skill in the Healing Art, and the title of "Indian Doctor," which has been so often fraudulently employed, has been very frequently a sure introduction to popular favor.

Samuel Smith, the historian of the "Province of New Jersey," added his testimony, that the natives "Were very studious in observing the virtues of roots and herbs, by which they cured themselves of many bodily

distempers, both by outward and inward applications; they, besides, frequently used sweating and the hot bath."

REMEDIES LEARNED FROM THE INDIANS.

Many of the early Botanic physicians of America appear to have obtained their first conceptions of medical knowledge from intercourse with the natives. In some instances they had been led into captivity, and so had the opportunity to learn the procedures and remedies employed by their captors. In other cases there were individuals of Indian descent who brought their skill to the knowledge of their white neighbors, by living among them and treating their various maladies. White men likewise cultivated friendly relations with native practitioners, and learned from them the plants and methods of treatment which they had found beneficial.

Rafinesque, the Bartons, Elisha Smith, and earlier writers, obtained in such ways a very wide knowledge of the medicinal plants which were in use among the aboriginal inhabitants. These were numerous enough to make a very complete Materia Medica by themselves. The category includes the following remedies now universally known as peculiar to the Eclectic School of Medicine, namely:

Podophyllum, Phytolacca, Iris, Leptandra, Aletris, Helonias, Collinsonia, Chionanthus, Asclepias tuberosa, Apocynum, black and blue Cohosh, Chelone, Euphorbia, Agrimonia, Xanthoxylum, Cactus, Gentian, Chenopodium, Equisetum, Lycopus, Hepatica, Hydrastis, Convolvulus, Arum, Arbutus, Geranium, Geum, Gaultheria, Sanguinaria, Lobelia, Dioscorea, Scutellaria, Spiræa, the various plants named "snake-

root," Sumac, Golden rod, Viburnum, Galium, Erigeron, Alnus, Veratrum Viride, and many others. These have since been manipulated in many ways,* and constitute a class of remedies not excelled by those of any rival school.

BOTANIC PHYSICIANS BECOMING A DISTINCT CLASS.

It has been shown already that during the colonial period, the medicines employed by physicians were chiefly, if not generally, obtained from the vegetable kingdom. As, however, the influence of the transatlantic schools and practitioners became more generally prevalent, these fell more and more into disuse, and even somewhat into discredit. Mercury, antimony, arsenic, venesection and the fly-blister became the formidable agents. The professional treatment, that of Brown and Broussais, under which General Washington died in 1799, illustrates forcibly how wide was the departure.

Nevertheless, there were physicians remaining who still were true to the principle of safe and more benign medication. Very generally they were practitioners who had obtained information as they were able, in regard to the remedial virtues of plants and the proper methods of treating the sick, and so had entered upon their calling, dependent upon their native tact, intuition and home-acquired knowledge. They very often began their remedial procedures upon themselves and with their near relatives, and were so successful that their neighbors were induced to seek their aid. Thus with humble beginnings they had continued till it had become necessary for them

* See *Digest of Materia Medica and Pharmacy*, by ALBERT MERRELL, M. D. Prepared under authority of the National Eclectic Medical Association.

to abandon their manual employments and assume formally the duties of the medical profession.

Few of them, however, left any record. The conditions of colonial and frontier life were not favorable to the writing of books. It has been an unseemly practice of their adversaries to taunt them as illiterate. It comes, however, with a very ill grace. Deficient as they may have been in book learning, they were endowed, most of them, with a degree of skill, and they had acquired a knowledge of remedies and a cleverness in employing them which amply justified their claims as physicians. They easily won and retained confidence, for their patients increased in larger proportion than those treated in the fashionable way, and without being permanently crippled, or made miserable for life, as was not unfrequently the case with the others.

That Botanic physicians, however, were not so illiterate as was pretended, is illustrated by the fact that Samuel Thomson himself desired to become the student of one, and was precluded by reason of his defective common-school education. At that time, physicians, as a general fact, had very meagre elementary instruction. Many, and probably the majority, had not a decent primary education, and were not able to write grammatically. It is by no means altogether different at the present time. The standard of medical learning in all ranks of the medical profession can be easily measured by the fact that in 1853, the Legislature of the State of New York passed an act ostensibly for the incorporation of medical colleges, but actually to prevent such incorporation, declaring in it that the condition for receiving the degree of Doctor in Medicine should be an attendance

at medical lectures for two terms of twelve weeks each. The courts of the State went further, evidently regarding medical learning as other than scientific. In 1884, the Court of Appeals rendered a decision adverse to the United States Medical College, solely upon the ground that a medical college is neither a scientific nor literary, but only an eleemosynary institution.

It is worth our while in this connection to bear in mind that in the earlier years of the Nineteenth Century, the very period when the attempt was in full energy to suppress medical non-conformists by oppressive statutes and vigorous persecution, the established school of medicine itself and the medical colleges existing under its auspices, were themselves in very ill repute with intelligent men. Professor Rush himself declared, in 1801, that "those physicians generally became the most eminent who soonest emancipate themselves from the tyranny of the Schools of Physic."

This was certainly a testimony from a high quarter in favor of independence of medical colleges by members in the profession, of original methods of practice and of the courageous adoption of new and better procedures. It was almost equivalent to the extending of a fraternal welcome to innovators, and even to practitioners who entertained diverse views. Dr. Rush demonstrated his sincerity and liberality by giving a friendly reception to Dr. Samuel Thomson, in 1813, and commending his doctrines to a candid examination. It is the genuine scholar and physician, the manly man, who is glad to learn and profit from any source of information, without question of its acceptance by others.

A significant recommendation has been given in later years to the remedies employed by the early Botanic and Reformed physicians. Very many of them have been adopted and palmed off upon the public as "new remedies," by writers and others who were by no means friendly to that school of practice; the precaution being taken at the same time, however, to avoid any rendering of credit due, or even an honest mention of the sources from which the medicines had been learned—and going so far, sometimes, as to name some individual of their own partisan complexion as having "introduced them to the medical profession."*

Efforts have been made at a later period to induce physicians to supply themselves with the various products of coal-tar and petroleum, these being made conspicuous by unmeaning and unpronouncable names. Their success is, however, by no means assured. The condition is very general among the "plain people," that medicines, in the preparing of which drugs of a mineral origin have been discarded, are of more certain benefit and safer in administration. The nostrums which are hawked over the country or kept on sale by apothecaries, are far more likely to attract purchasers when certified to be wholly of botanic origin.

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* This phrase is but an aping of the Old World ecclesiasticism. It is a covert insinuation that Eclectic, Botanic and Homœopathic physicians do not belong to the medical profession.

The medicines to which allusion is here made now flood the market. Among them are the various preparations of which Aletris, Viburnum, Chionanthus, Podophyllum, Phytolacca, and Stillingia are ingredients. The "Stillingia Compound," which has been manufactured by W. S. Merrell, and sold by Eclectic physicians for half a century, was adopted in this manner, backed up by a remarkable statement from Dr. J. Marion Sims to justify the "introduction." It is now advertised and sold under a variety of names as official, and forcibly illustrates ethics without morals.

Indeed, it has been the general belief and conviction from the times of Hippokrates, Chrysippus and Pliny till the present, that the remedies which are the most certain to accomplish the purposes for which they are intended, as well as to leave no disease after them—a morbid condition possibly worse than the one for which they had been administered—are from the vegetable kingdom.

EARLY TEACHERS OF MEDICAL BOTANY IN AMERICA.

Though Botany is now, as a general fact, too little studied in American medical colleges, it was more highly regarded in the earlier years of the Republic. There were many accomplished instructors, among whom we may name John Torrey, of the University of the City of New York; Doctor Short, at Transylvania University, in Kentucky; Stephen Elliott, of Charleston; Lewis Beck and William Tully, at Albany, and others at different places. They endeavored diligently to develop and disseminate the knowledge of the indigenous medicinal plants. Several of them published their observations; William Barton, of Philadelphia, described fifty plants, and Dr. Jacob Bigelow, of Boston, treated of sixty, giving also illustrations. They were preceded by Samuel Henry, who issued his *Medical Herbal* in 1814, containing an account of about one hundred and sixty medicinal plants. This author, like Culpepper and other early writers, did not give the scientific classification, and his book, though having a large sale, was severely criticised by Rafinesque and others. Indeed, it has been a cause for regret and deep humiliation, that so few practitioners, even among those who profess to belong to a school of Botanic Medicine, have deemed

it worth their while to acquire any thorough or considerable knowledge of Scientific Botany. This has been a serious drawback, and has afforded to their rivals a plausible pretext for claiming to have been original discoverers and introducers of new remedies obtained from the medicinal plants indigenous in America.

RAFINESQUE.

The study of the American Flora was prosecuted with marked thoroughness and ability by Constantine Smaltz Rafinesque. This distinguished savant was the son of a French resident at Galatea, a suburb of Constantinople, where he was born in 1784. He early manifested a passion for natural history. In 1812, he came to Philadelphia, and there prosecuted his studies with such facilities as he was able to obtain. Returning to Europe, he spent some years in Sicily, and became the author of several valuable scientific works in the French language. He came again to America in 1815, but had the misfortune to be shipwrecked off the eastern shore of Long Island, and so to lose all his books, manuscripts and other property. He thus entered the country penniless; but he was of a temper too elastic to be totally disheartened. He made a journey directly afterward to the West, as "the West" then existed, in order to pursue his studies in natural science.

In 1817, he was appointed to the Chair of Botany in Transylvania University. Several years later he returned to Philadelphia, and made it his final residence. He became the author of several works on History, Botany and Science; and prepared the first

Hand-Book in this country that could, to any considerable extent, meet the wants of the intelligent botanist and physician.* Its illustrations, over one hundred in all, are very accurate and beautiful. The plates were purchased in 1840 by Dr. Thomas Cooke, of Philadelphia, and were reproduced by him in the *Botanic Medical Reformer*, and also by Dr. Wooster Beach, in his work on the *American Practice*.

Professor Rafinesque is described by a later scientist as "one of the geniuses that occasionally appear to puzzle people of steady habits." He was outspoken in his opinions, indefatigable as an explorer and investigator, and possessed of remarkable originality. He spent a long time in the valley of the Mississippi, where he had opportunity to observe the native American peoples, the Choctaws, Chickasaws and Cherokees of the South, as well as the tribes then living north of the Ohio river; to learn their procedures with the sick, and the remedies which they employed. His impressions in favor of a vegetable Materia Medica, and of a reformed practice of medicine in accordance with it, were deepened into convictions which he recorded in no equivocal language in his *Manual of Medical Botany*. He declared, without hesitation, that "the popular belief that every country produces simples suitable to cure all their prevailing local diseases, is not devoid of truth." He further remarked that "there are many modes of effecting cures by equivalent remedies, but vegetable substances

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* MEDICAL FLORA; or *Manual of Medical Botany of the United States of North America*. Containing a Selection of above 100 Figures and Descriptions of Medical Plants, with their Names, Localities, Properties, History, etc., and Notes or Remarks on nearly 500 Equivalent Substitutes. In Two Volumes. By C. S. Rafinesque, A. M., Ph. D. 1828-30. Philadelphia.

afford the mildest, most efficient, and most congenial to the human frame."

The contemporaries of Rafinesque appear to have been morally blind to his merits, as well as mentally incapable of understanding his teachings. They passed him by accordingly as a man of no account. Scientific men often act like political leaders, and consider the new man as their rival. Their favorite way for disposing of him is to smother his influence by ignoring his meritorious achievements. Rafinesque was keenly sensitive to the treatment which he received, and in the caption or motto of his later treatise, *On the Fishes of the River Ohio*, he indicated his unfriendly emulators in sharp language :

"The art of seeing well, of noticing and distinguishing with accuracy, the objects which he perceives, is a high faculty of the mind, unfolded in a few individuals, and despised by those who can neither acquire it nor appreciate its value."

His work on the *Medical Flora* of North America was treated with a neglect almost supercilious. At that time the Linnæan system of classification was in full favor, and he had the temerity to propose a Natural Method, which possessed no attraction for superficial scholars. He was thus at odds with the received science of his time, and suffered accordingly the fate of those who are thus in the advance. At a later period, however, he received the meed of honor. The first to acknowledge his merits were the professors of Harvard University. Agassiz, himself of foreign birth, paid him this tribute :

"Both in Europe and in America he has anticipated most of his contemporaries in the discovery of new

genera and species in those departments of Science which he cultivated most perseveringly, and it is but justice to restore them to him whenever it can be done."

Professor Asa Gray followed this noble suggestion, and included in his *Manual of Botany* thirteen of the genera, eight sub-genera and sixteen species of the plants which Rafinesque had described. The sage had died neglected, and then had his monument.

The introduction to the *Medical Flora* is a very complete presentation of the whole subject. The learned professor, as with the ken of a prophet, had almost foreseen and divined the advent of the new American Reformed School of Medicine, and he threw the gate wide open for its arrival. We transcribe his language on the subject :

"1. The Science of Botany was at all times intimately connected with Medical Knowledge.

"2. Several ancient nations, such as the Grecians, Romans, Hindus, Chinese, etc., considered Medical Botany as equivalent to both botanical and medical knowledge.

"3. Medicine was then, and is still, among such nations, nothing more than the application of an empirical knowledge of vegetable substances.

"4. Thence, the usual vulgar division of Plants into the five great classes of *Aliments*, *Simples*, *Poisons*, *Flowers* and *Weeds* —or alimentary, medical, poisonous, ornamental and useless plants.

"5. At the revival of learning in Europe, this notion being general, the first works on Botany were, of course, mere sketches of Medical Botany, and comments on Grecian and Roman writers.

"6. When Tournefort and Linnæus, about a century ago, became botanical reformers, and made Botany a separate Science, their efforts and improvements were resisted by those who, at all times, contend against useful innovations.

"7. Linnæus in his *Materia Medica* gave a model of Syste-

matic Medical Botany, equally concise, perspicuous and accurate; but destitute of the help of figures.

"8. This model was followed by Schoepf [of Erlangen University] in his *Materia Medica of North America*, the first great work on our medical plants, published in German and in Latin, toward 1787. This small work of Schoepf has never been translated nor republished in America; although highly deserving of it.

"9. When America was settled, the native tribes were in possession of many valuable vegetable remedies, discovered by long experience, the knowledge of which they gradually imparted to their neighbors.

"10. This knowledge, partly adopted, even as far as Europe, and partly rejected by medical skeptics, became scattered through our country in the hands of country practitioners, Herbalists, Empirics, and Botanists.

"11. Schoepf collected his materials from them and noticed about three hundred and sixty plants as medical; but he did not go everywhere, nor exhaust the subject, since nearly double that number are actually in common use in different states of the Union.

"12. Since the United States have become an independent and flourishing nation, much has been done to teach and spread correct medical knowledge.

"13. The establishment of Medical Schools, Chairs of Materia Medica, of Medical and Systematical Botany, Medical and Botanic Gardens, Infirmaries, Hospitals, have largely combined to impart medical and botanical knowledge, through the professional class.

"14. This purpose has been aided by numerous publications of learned physicians and botanists, medical works, pamphlets, and journals, Pharmacopœias, Dispensatories, Inaugural Theses, etc.

"15. Notwithstanding all these means, it is a positive and deplorable fact that but few medical practitioners apply themselves to the study of Botany, and therefore are deprived of the aid of comparative Medical Botany.

"16. It is not less certain, but still more deplorable, that beyond the immediate sphere of medical knowledge, the majority of the people are yet a prey to medical credulity, superstition and delusions, in which they are confirmed by the repeated failures of theorists and occasional success of empirical rivals.

"17. Even in large cities and in the centre of medical light Empirics are thriving, because they avail themselves of the resources afforded by active plants, often neglected or unknown to the regular practitioners.

"18. It is not, perhaps, so well known that there are in this age and in the United States, American Marabouts, who, like the Marabouts of the wilds of Africa,* attempt in some remote places to cure diseases by charms, prayers, blowing, spitting, etc."

"AS OTHERS SAW THEM."

Medical practice in America, it is plain to see, Rafinesque did not regard as coming within the conditions of a learned profession. He presents the following view of the field, which is by no means flattering: "It is therefore necessary to spread still further correct medical knowledge. The state of medical knowledge is such in the United States as to require a greater diffusion of acquired knowledge, aided by freedom of enquiry, liberal views, and mutual forbearance."

It is plain to any one conversant with the history of that period, that when Rafinesque was writing there was a deplorable condition of affairs, mental and moral. Arbitrary laws existed in many of the states, physicians were persecuted by rival practitioners with a barbarous malignity, arrogant intolerance was displayed toward every difference of sentiment on medical methods, and bitter jealousies were rampant

* The Marabuts (*Almarabathan*) are the remains of a powerful Muslim sect that for seventy years ruled in Spain, Barbary and the Sahara Desert, close to Negroland. They arose in the middle of the eleventh century in the western part of Morocco, and were characterized by remarkable enthusiasm. They gained the dominion of Spain in 1073, but were driven out by the Almohades or Mahdi dynasty in 1147. They then gave up political affairs to become, like the Jews, a religious body only. They are venerated by the Berber population for their sanctity, and treat the sick by medicines, mesmeric procedures, etc. The famous Abd-el-Kader was a Marabout.

everywhere. Rafinesque thus describes the several classes then engaged in practice :

"20. The Practice of Medicine is now exercised by three sets of men or classes of practitioners : 1, The RATIONALS ; 2, the THEORISTS; 3, the EMPIRICS.

"21. The *Rational* medical men are liberal and modest, learned and well informed, neither intolerant nor deceitful, and ready to learn or impart information. They comprise the *Improvers*, *Eclectics*, and *Experimentalists*.

"22. The *Improvers* study nature, and the human frame, write their observations, and improve medical knowledge.

"23. The *Eclectics* * are those who subject and adopt in practice whatever is found beneficial, and who change their prescriptions according to emergencies, circumstances and acquired knowledge.

"24. While the *Experimentalists* are those who are directed by experience and experiments, observations, dissections and facts.

"25. But THEORISTS are often illiberal, intolerant, proud and conceited ; they follow a peculiar Theory and Mode of Practice with little deviation, employing but few vegetable remedies, and enlisting under the banner of a Teacher or Sect.†

"26. They are divided into many sects, always at war among themselves and their rivals. Such as the *Brownists*, *Galenists*, *Mesmerians*, *Skeptics*, *Chemicalists*, *Calomelists*, *Entomists*, etc.

"27. The EMPIRICS are commonly illiterate, ignorant, deceitful and reserved ; they follow a secret or absurd mode of practice, or deal in patent remedies.

"28. They include the *Herbalists*, vulgarly called the *Indian* or *Root Doctors*, and the *Steam Doctors*, who follow the old

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* This is the first application of the term "ECLECTIC" to designate any school or class of practitioners of medicine during the Nineteenth Century, and the definition here given is sufficiently full and explicit to describe the physicians who afterward adopted the appellation. It is not so easy, however, to perceive why the other groups, the "Improvers" and "Experimentalists," were not included with them instead of being distinguished as separate bodies.

† It is common now to deny that this class of practitioners is a *sect*. Its members style themselves "the medical profession" as the Roman Christians, denominate their ecclesiastical corporation "the Church," meaning thereby to exclude others from that distinction. The animus is the same in both cases ; Rafinesque's description holds good, nevertheless, substantially.

practice of the natives, the *Quacks*, or dealers in nostrums, the *Patent Doctors*, the *Prescribers* of Recipes, the *Marabuts*, etc.

"29. All these classes need instruction in the natural knowledge of medical substances; and it ought to be afforded to them so that they might become properly acquainted with those which they employ or may avail themselves of.

"30. Medical Sciences have lately been widely enlarged by borrowing the help of all the Natural Sciences; and the enlightened physicians begin to avail themselves of all the materials they can command, rendering all the sciences subservient or auxiliaries to their pursuits."

A PRECURSIVE WORK OF MEDICAL REFORM.

For the furtherance of the end here set forth, Rafinesque devoted his efforts. It was his avowed purpose to make botanical knowledge accessible to all. He spared himself neither time nor exertion. He made journeys over fourteen out the twenty-four states then comprising the American Union; performing over eight thousand miles of actual travel. He laid all alike under contribution, holding a voluminous correspondence with leading botanists and physicians, and never scrupling to seek from the illiterate the results of their experience. He never despised knowledge, he declares, because it came from an uncouth mouth. He tested his peculiar facts on himself and others. Thus he employed fifteen years before giving to the public the result of his labors.

Rafinesque was warmly opposed to the exclusive spirit and action of professional men in regard to the dissemination of scientific knowledge. He did not hesitate to declare his purpose to endeavor to make botanical learning accessible to all. The popular knowledge of the natural science had been prevented in the United States, he declared, because the first books published in them had followed the world of

splendid European publications intended for the wealthy only, or for public libraries. "Works of general utility," said he, "ought to be accurate, complete, portable, and cheap. Such alone can spread the required correct knowledge, and suit every class of readers." He accordingly announced it as the aim of his work to be "a portable work of Medical Botany for the daily use of medical students, physicians, druggists, pharmacians, chemists, botanists, florists, herbalists, collectors of herbs, heads of families, infirmaries, etc."

He set forth the importance of the subject in plain, but forcible terms. In botany, he remarks, the great majority of medicinal substances have been ascertained and rendered available, and the study of medical equivalents enables to detect and compose botanical and medical equivalents. "Medical Botany, teaching to know and appreciate the greatest number of articles employed in Materia Medica, is become indispensable to the enlightened physician. Vegetable Chemistry analyzes vegetable substances, discusses their actual principles and ascertains the equivalent or incompatible substances. Even Pharmacy, by the aid of Botany and Chemistry, has become a science. Druggists and chemists who sell vegetable articles or drugs, ought to be botanically acquainted with them, so as to distinguish the genuine kinds and detect the frauds or blunders of the collectors and herbalists."

It had been ascertained, he explains, that there are nearly six hundred medical plants in the United States, actually known and used as such; of wnich, however, many are merely medical equivalents. Of this number he made choice of one hundred and five as being the most active and efficient medical types;

and he prepared pictures and descriptions of them for his treatise. He likewise mentioned many of the others as substitutes or *succedanei*, possessing apparently the same qualities and properties. In fact, he remarks, they are mostly used for one another throughout the country. He aimed to give in concise terms, a complete knowledge of them in their botanical, medical, chemical and historical points of view, prefixing to his account, the general principles of botanic science as preliminary guides.

RAFINESQUE'S THEORY OF PHARMACY.

The purpose as well as the trend of the writings of Rafinesque was to regenerate the art of medicine in his adopted country, that it might become an art of healing as well as an exercise of the mental faculties. He had witnessed its numerous failures, and believed them to be the result of obnoxious medication supplementing the ignorance of the prescribers. He sought to remedy all this by bringing into notice the indigenous medicinal plants of the United States, explaining their technical classifications in simple language, and setting forth definitely their specific virtues. "Every medical plant," he declared to be "a compound medicine prepared by the hands of Nature in the most suitable form for exhibition and efficacy in suitable cases."

By no means, however, did he approve of the practice which has since come into general favor, of separating the medicinal principles by chemical manipulation. "The active principles of medical plants may be obtained in a concentrated form by chemical operations," he admitted, "and their effects are then

stronger and quicker, but less congenial to the human frame than in their natural pristine condition."

Rafinesque likewise took a position very decided against the extreme notions of polypharmacy, which were current, and inveighed forcibly against the practice of jumbling scores of ingredients into a single formula. While he inculcated the doctrine that all vegetable substances are compounds, and that it is proper to combine several medicinal agents in prescriptions, he insisted that they should be compatible and in accordance with the same principle as nature herself enforced. The following are some of his statements and declarations:

There are several modes of effecting cures by equivalent remedies; but vegetable substances afford the mildest, most efficacious, and most congenial to the human frame.

Few plants possess a single [uncompounded] property; but many are commonly blended together in the same plant.

Different parts of a plant have often separate qualities and properties.

Medical substances becoming more powerful by admixture, those which enter by vital action into the organs of plants are rendered more powerful by intimate combination.

By combining several medical plants in prescriptions, their effect is increased.

Nauseous or noxious plants may be rendered grateful and available by combination with others of a different character.

But all combinations must either coincide, or correct each other, or else they are superfluous and useless.

When too many substances are mingled, or several that do not coincide, they often impair one another.

The combining of substances which exert a chemical action on each other must be avoided, unless a peculiar medical result is required.

These principles are now very generally recognized by intelligent pharmacists and physicians. Having brought his work to a close, he laid it as an offering upon the altar, trusting that in due time it would be found acceptable. "If this labor," said he, "may suit all classes of readers, and all who employ medical plants, the wishes and objects of the author will be fulfilled."

Thus modestly did he set forth his work. He had, however, too sharply indicated the shortcomings of medical practitioners for his views to meet their ready acceptance. Hence his words fell on unwilling ears, and were as an unknown language. They long proved a seed sown by the wayside, among thorns, and on the surface of rocks. A later generation, however, began to learn his worth, the most accomplished savants have gladly availed themselves of his learning and classifications.

RAFINESQUE AND WOOSTER BEACH.

Nevertheless, the labors of Rafinesque were not without fruit during his life-time. He did not succeed, as he had contemplated, in bringing over the leading physicians to his views, or in persuading them to drop the current methods of Brown, Cullen and Boerhaave. The old bottles were unfit as receptacles for his new wine; they would have been sure to burst with the ferment. His work met with scant favor. He was obliged to find his friends in the highways and hedges. He had been impatient of the illiteracy exhibited by earlier writers and practitioners of herbal medicine, and had expressed his feelings with undue warmth. Yet it was among them that he was to find the first good ground for his sowing, with promise of an abundant fruitage. He also

discovered that many of whom he had spoken with harshness, were really intelligent, with an eager desire for broader knowledge and more general scholarship.

There was at that time little concert of action to enable any successful effort for the bettering of medical practice. Eminent members of the profession acknowledged its glaring defects, even admitting that as carried on it was rather a curse than a benefit to mankind. The various teachers and authors had accumulated a huge number of books, with little improvement of methods. A writer in the *Western Medical Reformer*, in 1837, described the situation and the evolution of a new school in medicine :

"Facts well attested existed in sufficient number to form a harmonious system ; but these were scattered over a vast field of voluminous works, mixed up with error and misconception, an hundred fold, so as to render it almost the labor of a life-time to correct and collect them. But the science of medicine being founded chiefly upon observation, the truth must be sifted from this mass, laborious though the task might be, or not obtained at all ; as the experience of no *one* man would suffice as a guide in practice.

"In this state of things the highest desideratum was some great Eclectic * to perform the herculean task of munching at the abounding chaff and obtaining the hidden grain ; and possessed of sufficient

* This term seems to have been first applied in a letter to Samuel Thomson by Professor B. Waterhouse of the Harvard Medical School. "Now," says he, "my sagacious, industrious and much-respected EMPIRIC or ECLECTIC, if you like the latter term better." Some years later, Dr. Beach was having an argument with Dr. I. J. Sperry, a prominent physician of the "Reform" or Thomsonian school, and was setting forth his notion of retaining what was useful in the old practice, when the latter exclaimed half disdainfully: "You are an *Eclectic*." Dr. Beach quickly replied: "You have just given me the term which I have wanted ; I am an Eclectic." Probably, however, he did not imagine that those entertaining his sentiments would be classed under that designation, as he generally designated them simply "*Reformed* physicians."

talent to combine, arrange and systematize facts when arrived at. But this was not all. Remedial research had been too much confined to one kingdom, the mineral; and the resources of others, especially the vegetable, required development. Both these desiderata have been attained to an almost incredible though still imperfect extent, in Dr. WOOSTER BEACH, the *Founder of the Reformed System of Medicine.*

Wooster Beach was born at Trumbull, in the State of Connecticut, in the year 1794. He early displayed the qualities which were exemplified in his subsequent career. He was a many-sided man, always desirous to do the right so far as he could see the right, sincere in conviction and earnest in purpose, deeply religious of temper, and enthusiastic in his endeavors to reform the art of medicine, because he believed it to be the most certain means to be useful to others. He early became imbued with a strong distrust of the current medical practice, and was familiar with the sweeping criticisms bestowed upon it by such men as Rush, Hamilton and Gregory. He was convinced that "the present practice of physic and surgery, so far from being founded on correct principles, was actually a curse to society," and believed that better remedies existed for diseases than the lancet, mercury and other drugs in common use. At this period a German Botanic physician, Dr. Jacob Tidd, of Amwell, in New Jersey, had been engaged in successful practice for half a century. Dr. Beach became his student and finally succeeded him at his death. Nor did he stop contented with this. He continued his researches, scrupling not to learn from any source of information, but seeking it from scholarly physicians, Indian doctors, herbalists, female practitioners, nurses, and any body who could tell him anything worth the know-

ing. His reputation as a successful practitioner led to invitations to the city of New York. The laws of the State made it a penal offense to practice medicine without the authority of the dominant school, and he became a student at the medical department of the University, graduating in due form and becoming, as the law directed, a member of the New York County Medical Society.

Dr. Beach attempted unsuccessfully to introduce the Reformed practice through the medium of the medical profession. He discovered, however, that "an art founded on observation can never arrive at any high degree of development while it is confined to a few who make a trade of it." In his conception, knowledge of every kind should be regarded, not as the exclusive property of a privileged number, but as the common right of all. "The only hope of a reformation and revolution in medicine, under Divine Providence," he declared, "is the dissemination of our principles through the mass of the community."

He now began his career as a public teacher, and following the example of John Hunter and others, opened an infirmary, which afforded ample opportunity for clinical observation, and was afterward expanded into the Reformed Medical College of the City of New York. These were carried on for years with such good effect as to assure a permanent beginning for the American Practice of Medicine. Though never partial to the extensive curriculum of medical colleges, Dr. Beach was quick to put forth efforts to elevate the standard and make the Reformed physicians skillful as practitioners. His aim was not to cultivate the notion of a fixed or routine system, but to release the mind from the dogmas of creeds and

systems, the doctrines of the medical schools as they were then taught, and to direct it into the broad field of investigation. He secured the permanency of his system, not so much from the theoretical and inductive processes of his reasoning, as from the practical results of his clinical teaching.

In 1832, occurred the first visitation of Asiatic cholera in America. It seemed to come from an unseen power, with no apparent connection with any ordinary cause to disseminate the contagion. It appeared in Quebec, in June; then in Albany, then in New York, the 17th of July.

The first seizures were of individuals remote from one another, who had had no communication with any infected place or individual. It often neglected the abodes of filth and wretchedness to revel in districts at once clean and well drained. It was truly no respecter of sanitary conditions, and seems never to have been.

The physicians of New York generally treated their patients with calomel, and such were almost sure to die. A resolution of the Common Council had forbidden the accepting of certificates of death, except from a "regular physician," but the senseless provision was now repealed. Alderman John Palmer, of the Tenth Ward, appointed Doctor Beach to take charge of all poor patients in that district, who should be attacked by the epidemic. His assistants were generally physicians of the dominant school, but they obeyed his directions loyally. The visitation lasted three months, during which they prescribed for about one thousand cases of cholera, with successful results nowhere equalled.

Doctor Beach remained at his post in New York,

teaching, conducting a religious journal, and attending to the duties of his profession. He added to these the compiling of medical works. The new school of practice, with new institutions for the inculcating of its doctrines, made new text-books necessary. His great work, *The American Practice of Medicine*, in three volumes, was published in 1833, and became at once the standard work of Reformed physicians. Copies of it were sent to the various sovereigns of Europe. They submitted it at once to their Court Physicians, who generally gave the work unqualified commendations. Hufeland replied with a golden prize-medal from the King of Prussia, and the diploma of Corresponding Member of the Medical and Surgical Society of Berlin. Similar medals were conferred by other sovereigns—by William IV., of England; Louis-Philippe, King of the French; the kings of Holland, Saxony, and Wurtemberg, and by the Grand Duke of Saxony. His Holiness, Gregory XVI., was not behind in acknowledgment. "Seeing this work honored by so many sovereigns of Europe, and by so many distinguished professors in the two hemispheres," he added his testimony with a medal.

Some of the letters were autographs from the sovereigns themselves. The declarations of the savants in medicine were most flattering. "The work which has just flowed from your learned pen," said Baron Von Lehr, of Wurtemberg, Privy Counsellor, "will not fail to attain the approbation of all enlightened connoisseurs." Baron Alibert, of the Hospital of St. Louis, in Paris, added his commendation: "It is a model of analysis, and a masterpiece of method and medical experience." Professor von Walther, surgeon to the king of Bavaria, wrote to

Doctor Beach personally : "This work, so interesting and instructive, places you in the rank of the most celebrated authors of our art."

The medical societies of Leipzig, in Saxony ; Bamberg, in Bavaria, and Wetterau, in Germany, in their turn transmitted diplomas of membership. Other persons in the higher walks of life wrote acknowledgments equally flattering in their terms. At this time, it will be borne in mind, the leading minds of Europe were contemplating the evolution of a new Rational Practice of Medicine, to supersede the unsatisfactory procedures then in vogue, and were ready to welcome every proposition which might conduce to that end.

Doctor Beach was by no means unrecognized in his own country. Leading citizens, members of the bar and medical profession, judges and clergymen, were among those who commended him and his works. Dr. James R. Wood, of the Bellevue Hospital Medical College, declared him one of the great men of the age.

Rafinesque also, cordially gave his adhesion to the new American Practice, as the realization of his own aspirations. In a letter to Dr. Beach, under date of January 6th, 1840, he says :

"I must now state again, that I think highly of your medical work. I belong, like yourself, to the Reformed Practice of Medicine, and agree with you much better than with the Thomsonian, Homœopathic, and Botanical Empirics. Your system is a good one. If not perfect, it is better at any rate, than most of the fashionable systems—Galenian, Brunonian, or mineral. Your system of Surgery appears both benign and safe, and much better than the old butchering system."

Thus, generously and manfully, did Rafinesque render honor where he believed it due. He now witnessed the dawn of the new morning, when the methods of Cullen, Brown and Boerhaave, which had prevailed everywhere during the preceding night, were likely to be supplanted by greater intelligence among the people, better methods of medical treatment, and by broader views among jurists and legislators of personal rights and constitutional liberty. He had desired to see the coming day, and believing that he saw it, he was glad.

A few months later, on the tenth of September, 1841, he passed from among the living.

Before, however, his works received due attention, a generation had gone by. Then, Professor Agassiz, himself also of foreign birth, Asa Gray, and others, began to praise his scientific achievements. His works were collated and published in 1884. As with other illustrious explorers in the world of science, the justice which had been denied to him in his life-time, was thus acknowledged by this rearing of his literary monument forty years after his death.

"Get one hero," says D. A. Wasson, "and you may get a thousand." This utterance was now verified.

ELISHA SMITH.

Reformed physicians have been aptly described by one of the veterans of the school, as "formidable in numbers, and spread over a wide domain, but as requiring for centralization and power, yet to learn the uses of combination and unity of action." The centrifugal force seems to have been the stronger. The love of ruling produces animosity and contention

where there ought to be confidence and fraternal co-operation.

About the time when peace was declared between Great Britain and the United States, in 1815, Dr. Elisha Smith began the practice of medicine as a Botanic physician in the "Genesee country," not far from the present city of Rochester, in Western New York. He speedily attained a flourishing practice. He was endowed with superior genius, and appears to have possessed the qualities necessary for a leader of opinion. He had acquired an excellent medical education for the period in which he lived. About this time Dr. Samuel Thomson published his work, and Dr. Smith perceiving it to be as he considered incomplete, conceived the project of compiling another which should be broader in sentiment, more complete and accurate. He was destined, however, to be interrupted for a season.

In the years succeeding a war, there is a decided trend toward arbitrary and multifarious legislation. This has been observed ever since the close of the late civil war in America, and it was likewise the case after the war of 1812. The instinct of liberty was suppressed or blunted outright. The attention of the people was turned from matters of principle to subjects of material profit and advantage. The occasion was seized to incorporate afresh into the legislation of the states on the Atlantic seaboard, from Maine to Georgia, statutes making the practice of medicine except by physicians of the dominant school, a misdemeanor. Pennsylvania* and the Western

* Governor J. B. Shultz is entitled to the credit of exempting Pennsylvania from this dishonor. A bill similar in provisions to the Black laws of the other states had passed both branches of the legislature, at the instance of the Medical

States generally were the honorable exceptions. It was made a penal offense to treat the sick, except by virtue of a license or permission granted by a civil magistrate or some medical society. The diplomas of medical colleges in those days were not valid as licenses, except a special statute invested the institution with authority equivalent to that possessed by medical societies.

Though a patient recovered perfectly, and it was due to the heterodox medical treatment, and especially if he had received no benefit but only harm from the other physicians, these facts by no means exculpated the benefactor. An Apostle of the Christian religion, and even the Son of God himself would have been an offender under this legislation. Botanic physicians were thus virtually outlawed. They were forbidden to accept a fee, however freely given, or to be in any manner recompensed for their good offices. The Spotted Beast and Two-horned Dragon-Prophet of the book of *Revelation** seemed to have taken the control, as thus described, of the medical legislation of the country.

Society of the State. The stalwart and clear-headed governor returned it vetoed, as being unconstitutional as well as inherently unjust. The judicial subterfuge of "Police Power," which has been in later years put forward by courts and legislatures as their authority for overriding personal rights and the constitutional safeguards of liberty, appears not to have been employed in those days, except in the case of negroes in certain of the slaveholding states.

* *Revelation*, xiii: "And it was given him to make war with the saints, and to overcome them; and all that dwell upon the Earth shall worship him, *whose names are not written in the Book of Life.* * * And I beheld another Beast coming up out of the Earth; and he had two horns like the Lamb, and he spake as the Dragon. And he exerciseth all the authority of the First Beast in his presence, and causeth all the Earth and them that dwell therein to worship the First Beast. * * And he caused all, both small and great, rich and poor, free and bond, to receive a mark in their right hand or on their foreheads—and that *no man might buy or sell, save he that had the Mark of the Beast, or the number of his name.*"

In the charter of the Royal College of Physicians of London, is a provision allowing all persons to make use of the indigenous medicinal plants of the country for the cure of diseases, but under the condition of receiving no fee or compensation for the service. A similar clause was inserted in most of the prohibitory medical statues of the United States. Perhaps this sorry permission would have been withheld, but for the fact that a strict application of the statute might otherwise transform the very law of nature directly into crime, making the mother who ventured to do something for her suffering child liable therefor to fine and imprisonment.

Yet at the very moment when this war was waging the country abounded with crippled individuals, made physical wrecks from the medical treatment which it was sought by this legislation to protect from competition and to enforce as far as practicable, upon unwilling patients. On the other hand, those treated by Botanic physicians very generally recovered from their maladies, and none of them had been made lame or permanently distempered from the operation of the medicines which had been administered to them.

In 1818, the legislature of New York took a further step in the same direction and enacted a statute forbidding the degree of Doctor of Medicine to be conferred upon any person who had not complied with the requirement of preliminary study with a physician of the dominant school. It was amended a year later, to be more precise and definite, in the following terms: "No person shall, after the first day of May, 1821, be admitted to an examination for the practice of physic or surgery, who has not studied for four years with a regular physician or surgeon."

This made it impossible, as the law was construed and enforced, for any person, however proficient, to obtain the degree, except he was known or assumed to be hostile to the Reform doctrine. Even though he should comply literally with the prescribed conditions, there were certain to be pretexts and evasions at hand convenient to find and multiply in order to assure his rejection.

The remarkable prediction of William Harvey, the discoverer of the circulation of the blood, was thus again fulfilled to the letter :

"After the space of so many hundred years' experience, *not one single medicine* has been detected that has the least force directly to prevent, resist and expel a continued fever. Should any, by a more sedulous observation, pretend to make the least step toward the discovery of any such remedies, their hatred and envy would swell against him as a legion of devils against virtue. The whole society will dart their malice against him with all the calumnies imaginable, without sticking at anything that would destroy him root and branch. *For he who professes to be a reformer of the art of Physic must resolve to run the hazard of the martyrdom of his reputation, life and estate.*"

The enactment produced astonishment among the foremost minds of the country. That a republican legislature should be more arbitrary and proscriptive than a monarchy, seemed anomalous. Professor Waterhouse writing a letter of introduction for Dr. Samuel Thomson to Dr. Samuel P. Mitchill, then Senator in Congress for New York, made this vigorous protest :

"How came your legislature to pass so *unconstitutional* an act as that called the '*Anti-Quack Law*'—such

as the Parliament of England would hardly have ventured on?* For *who will define quackery?* Were I sufficiently acquainted with your excellent Governor Clinton, I would write to him on the subject. You New Yorkers are half a century behind us in theological science, but your Quack bill looks as if you halted also in physic."

It is hardly necessary to add that the medical laws were sought to be enforced in the same spirit of hate and cupidity which had inspired their enactment. The sleuth-hounds were quick on the scent and eager to harry the game and batten on their prey.

Dr. Elisha Smith became a prominent object of attack. He was subjected to repeated prosecutions that came not a line short of implacable and remorseless persecution, unrelenting as that of the Huguenots in the dragonnades, and of the Camisards in the Cevennes. For a time he maintained his ground, caring for his patients and doing what he was able to ward off the attacks of his foes. Finally, however, his sense of duty to his family, and weariness of conflict where justice was not attainable, led him to seek a home in a less unfavored region. He removed, in 1825, to New Brunswick, in the state of New Jersey and afterward to New York, in 1829, where he spent the remaining years of his life.

He now addressed himself manfully to the work before him. The legislature of New York, at an extraordinary session, in 1827, had passed a statute virtually outlawing Botanic physicians. Every medical society in the State was a Holy Office to receive information

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* Recently a leaf has been taken from American legislation, and Herbal physicians are hunted down in England, and fined with severity equivalent to that sought to be inflicted in American states.

and set on foot prosecutions. The Botanic physicians, having no close affiliations, could be singled out, one by one, and made an easy prey. Besides this, their too common deficiency in general knowledge also rendered them comparatively helpless. On the side of their oppressors was the power, social and political.

Dr. Smith insisted upon the abandonment of their Ishmaelitish attitude, and the establishing of closer fraternal relations, as essential to existence. He declared that by the forming of medical societies, "with a respectable and intelligent standard of admission," the favor of the public would soon break their fetters and procure the repeal of the obnoxious legislation. The "New York Association of Botanic Physicians" was accordingly formed and he became its president.

Other societies were organized in the western counties. Dr. John Thomson, the son of the founder of the Reform school known by his name, also took an active part in the same direction.

Dr. Smith carried into effect his project of former years, and in 1830 his treatise was published under the title of *The Botanic Physician.* This work, in point of merit and ability, compares favorably with the medical works extant at that period, and in the judgment of many, surpassed the publications of Dr. Thomson and Dr. Beach, both in matter and in literary style. Dr. Smith died a few months afterward, and for a time the attempt to maintain the medical organization was neglected.

His son, Dr. Isaac S. Smith, took up the work. He had been liberally educated, and was graduated in medicine at one of the colleges in New York. He organized anew the Reform practitioners, as "The Society of Botanic Physicians and Surgeons," and

under its auspices a medical college was established, with a full corps of regular instructors, he himself lecturing upon anatomy, physiology and surgery. The enterprise was conducted till 1846, with a fair degree of success, but as appears to be a common occurrence with medical colleges, it was affected injuriously by dissensions. At length Dr. Smith removed from New York to Michigan, and the school was discontinued.

There has been some perplexity in regard to the existence of two separate organizations at that time in New York, having similar avowed principles and purposes. The solution has been offered that Dr. Beach and Elisha Smith were both alike ambitious to be regarded as founders of the New School of Medicine. Such a rivalship, however trivial its importance may seem to others, is generally regarded as a very serious affair by the actors themselves. The passion for ruling and holding chief places has been a prolific source of contention. Leaders in a movement seldom give quarter, or even permit of common justice to any one of their associates who questions their prerogative, but are far more ready to join hands in amity with open adversaries.

Dr. Smith was an older man than Doctor Beach, and appears to have been better equipped for conducting an enterprise. He was well educated, aggressive in temper, and skilful as an organizer. His purposes and endeavors were definite and well arranged. He aimed to bring about a revolution in public sentiment, in order to procure the repeal of the unjust and proscriptive statutes against Reformers in the Healing Art, and to place the New School of Medicine upon an impregnable basis. This might have obviated many

subsequent controversies, and assured that more perfect union which would have enabled successful resistance to future assaults. New York would then have remained the chief seat and nucleus of the Reformed School, under conditions at once favorable to its prosperity and permanency.

Doctor Smith did not live to behold the day of redemption, when Alabama taking the lead, Connecticut, New York and the other commonwealths should enact laws removing the obnoxious proscription of former years, and give all physicians equal opportunities under a free government, to exercise their art without let or hindrance. His death, occurring a few months after the publication of his work, seems to have disconcerted whatever plans he had formed, and to have largely changed the aspect of affairs. It was reserved for others to fight the battle of freedom and enjoy the glorious triumph. The conflict, however, was carried out on the lines which he had laid down, the deserving of success as essential to its achievement. Though he did not live to witness the consummation, he had done well his part to prepare the way and make straight the path leading to the glorious result.

CHAPTER X.

THE GREAT CONFLICT FOR MEDICAL FREEDOM.

It often seems necessary for us to learn old lessons anew, or at least, that we did not learn them properly. We do not always profit by the experience of those who have preceded us. In the history of our country, we are told that the early colonists of the English-speaking states came to this continent in order to enjoy liberty of conscience and religious worship. Yet it was very generally liberty for those only who believed the same doctrine and had similar views of life. Even the American Revolution did not immediately emancipate slaves or deliver from the thraldom of an Established Church. Though the Federal Constitution with its Virginian amendments assured equal rights to citizens and prohibited a National establishment of religion, its framers forgot other professions, and States kept up their old ways. An ascendency was established in the medical profession as arbitrary, as pretentious, and as imperious as ever in any country was that of the Church. Even before the Revolution, the General Court of Massachusetts, for example, not only prescribed the kind of dress and modes of entertainment, but required stated attendance on religious worship, and forbade any one to administer a medicine which was not approved by the standard medical authorities. New Jersey did something similar. The history of the Nineteenth Century in the United States was introduced by a narrative of usurpation and

persecution, authorized by statute and enforced by the various appliances of law as merciless and vindictive as the prosecutions of witches and dissenters from the Established Religion, till we might well doubt whether this was actually a free country, or had a Constitutional Government. After this followed a period of successful resistance, and a swinging round the circle of legislation, which those who are curious and inquisitive in such matters will contemplate with surprise.

SAMUEL THOMSON.*

Of Samuel Thomson we would speak in terms of respect and commendation. The friends of medical freedom and medical reform owe him a debt of honor and gratitude as a public benefactor. Great occasions are met by individuals who almost seem to have come into existence for the purpose. Such persons are often set down as of inferior mould, or are overlooked altogether by those more favored by wealth and social condition, till the exigency calls them forth and obliges them to take the responsible position. We find then that their humbleness of origin, their peculiarities of character which many are eager to point out and blame, the trials which they have undergone, were so many preliminary conditions to prepare them for their work.

* The orthography of this name is a shibboleth by which are tested the candor and intelligence of every writer attempting to treat of the individual himself, or of the peculiar medical practice which he originated. Not only has the surname been spelled persistently with the superfluous *p*, but several encyclopædias have added the asinine blunder of describing him as "Dr. Benjamin Thompson, of Concord," and also as a founder of the Eclectic School of Practice. For those who care for the actual truth, it is proper to state that Dr. Benjamin Thompson was an entirely different person, and that Dr. Samuel Thomson, as he always wrote his name, never lived at Concord, and always heartily opposed and denounced the *Reformed* practice of medicine since known as Eclectic.

Indeed, it is a very general fact that the persons who save us in the hour of mortal peril, are seldom of our own selecting. Not many who are regarded as scholarly, able, or of superior social rank, are at hand for such occasions, but chiefly individuals of another class. The records of the past abound with examples. Mirkhond, the historian of Ancient Persia, tells us of the blacksmith who upreared the standard of revolt and expelled the murderous Zahák from the throne, and that his leathern apron became the banner of the liberated nation. Another record, somewhat more familiar to us, treats of a youth of ignoble origin, whom his family hesitated to acknowledge, but who came from the tending of sheep to deliver his countrymen from their oppressors. In the last century a favorite play in the theatres of London burlesqued as tailors and mechanics, the commanders who had, both in council and in the field, achieved American independence. In the later days of the Republic, it was Lincoln from the prairie, untrained in statecraft and diplomacy, who guided the ship of state through its most critical period.

Samuel Thomson was one of this little number of exceptional men. He possessed the qualities which characterize the leader and reformer: deep conviction and unflinching tenacity of purpose. His early discipline and experience brought these qualities into action. He was born at Alstead, then a frontier settlement in the colony of New Hampshire, and passed his youth in hardship and privation. The region had hardly been reclaimed from the wilderness, and every one's efforts were required to gain a simple livelihood. Thomson early displayed a passion for learning the names and medicinal virtues of plants, but his

opportunities for even simple elementary instruction were limited. When it was proposed to let him become a student of Dr. Fuller, a Botanic physician in the neighboring town of Westmoreland, he was rejected because of his defective education. He was considered as fit only to work on the land. He was in a far worse case than Grant and Jules Faure, the tanners, of Roger Sherman and Henry Wilson, the shoemakers, and Franklin, the chandler's son.

Nevertheless, it was not permitted that Samuel Thomson should bury himself in obscurity. He married and became the father of a family. The frequent occurring of sickness with his wife and children occasioned the employing of physicians, and he soon began to observe that with the medical treatment the sufferings of the patients were aggravated. Presently, in sheer desperation, he ventured to undertake their care himself, meanwhile paying the physician for the professional visits. His efforts were rewarded by their speedy recovery. He had already acquired much information in regard to the use of simples and in nursing from an elderly woman, who was a Florence Nightingale in the neighborhood. The fact now impressed him forcibly that under the medical treatment in vogue, the term of sickness was unnecessarily prolonged, and that it was very often followed by a permanent condition of ill health. "I had found from experience," he declared in his *Narrative*, "that doctors made more diseases than they cured." He thus inadvertently reiterated the assertion of Dr. Rush, frankly uttered about the same time. Thenceforward he dispensed with the services of physicians, and took charge of his family through a formidable array of maladies; among which were measles, scarlet fever,

diphtheria and small-pox. In the last of these he was his own patient; and under his care they all recovered.

His neighbors soon observed his aptitude in treating sickness, and did not hesitate to avail themselves of his services. As, however, he was regarded only as a farmer like themselves, they did not consider that though they employed him, he was entitled to fee or remuneration like a professional man. The demands upon his time and efforts prevented him from working steadily upon his farm, and threatened to keep him from providing for his family. He finally resolved to change his employment.

This was in the year 1805. He traveled about for several years, afterward making his home at Beverly, in Massachusetts, and later he opened his office and establishment in Salem street, in the city of Boston.

Thomson did not adopt the methods employed by the Botanic physicians and Herbalists of the time, but some of them were current with the aboriginal inhabitants of the country.* He propounded a theory and adopted the procedures which were distinctively known by his name; and discarded utterly the methods in common use,—the lancet, leech, cupping-glass and Spanish fly, together with the various mineral drugs and poisonous vegetable productions which constituted the fashionable physician's armament. The results were generally and often singularly beneficial.

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* Dr. Thomas Cooke, who was a student of Dr. Howell, a Botanic physician from London, propounded this question in the *Botanic Medical Reformer*, of May 20, 1841: "We should like to know of Dr. Samuel Thomson whether he ever perused a work entitled *Woodward's State of Physic and of Diseases*, London, 1718; for it is so much like his system that we can only tell them apart by a little difference in the Materia Medica."

To think is to theorize; whether it be the speculation of the philosopher, the deduction of the scientist or the conjecture of the private individual. Thomson's theories were very simple. He adopted the dogma of the Ionian and Grecian sages, that heat, the calorific force or excitative energy, is the substance of life, and following it to its logical conclusion, he entertained as truth the sentiment propounded by Lord Bulwer-Lytton, in his favorite work, that this primordial principle of life may also be its renovator and the restorer of health. He expressed the sentiment, however, in quainter terms: "That all diseases are the effect of one general cause, and can be removed by one general remedy." This he affirmed to be the foundation upon which he had erected his fabric.*

This one general remedy or principle may be applied in a great variety of forms. Thomson's common procedure, however, consisted in emesis produced by the administration of Lobelia inflata, in the abundant use of the vapor-bath, and such vegetable remedies as the case might seem to require. The catalogue of medicinal plants employed by him and his school of practitioners, consisted principally of the following, to which we give the technical in preference to the common names:

Achillea, Aletris, Althæa, Amygdalus Persica, Angelica, Anthemis, Apium, Apocynum, Artemisia,

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* "Let the unprejudiced man—" says Professor Waterhouse, "let him remember that Thomson, without knowing it, has adopted a theory of Galen; and his idea of the preserving power of Nature, the curer of disease and the preserver of life, appears to be the same as that acknowledged by Hippokrates. He tells all he knows in as plain a manner as he possibly can, and leaves you to form your own judgment, provided you divest yourself of the fashion of this world in physic, which, with priestcraft, is fast passing away."

Arum, Asarum, Aster, Berberis, Betula, Capsicum, Cassia Marylandica, Ceanothus, Centaurea, Chelone, Chimaphilla, Chrysanthemum parthenium, Cochleria, Cornus, Cypripedium, Eugenia, Eupatorium perfoliatum, Ferula, Fragaria, Galium, Geranium, Geum, Hamamelis, Hedeoma, Hydrastis, Ictodes, Inula, Juglans, Lactuca virosa, Lappa, Laurus camphora et cinnamomum, Leonorus, Ligusticum, Lobelia, Macrotrys, Marrubium, Mentha viridis et piperita, Myrica gale et cerifera, Myristica, Myrtus, Nepeta, Nymphæa odorata, Osmunda, Panax, Pinus Canadensis, Piper nigra et cubeba, Polygonum, Populus, Prunus Virginiana, Quercus alba et rubra, Rhamnus catharticus, Rhus glabra, Rubus strigosus, Rumex crispus, Salvia, Sanguinaria, Sinapis, Solanum dulcamara, Solidago, Statice, Symphytum, Tanacetum, Taraxacum, Trifolium pratense, Trillium, Ulmus fulva, Verbascum, Verbena, Xanthoxylum, Zinziber.

It will be observed that many of these are enumerated by Rafinesque, and that they were in use among the aboriginal tribes in the United States. As the procedures which Thomson employed were also familiar among them, and as the district in which his earlier years were spent was not far from their territory, the charge has been made, or rather insinuated, that he had gained his knowledge from them. Very probably much of it was indirectly so derived, but there is no sufficient evidence impugning his truthfulness and sincerity in the matter. Many persons discover what others already knew, and honestly suppose that they were the first. Thomson was not strenuous to declare himself original in what he laid down, but was diligent to learn whenever he could, and he possessed the talent to elaborate it into a distinct method.

One man possessed the sagacity to peer beneath the rough garb of the farmer-physician and find the precious metal beneath. This was Dr. Benjamin Waterhouse, for twenty-seven years the professor of the Theory and Practice of Medicine in the Harvard Medical School. He spoke boldly in his behalf. "Had John Hunter," said he—"had John Hunter, whom I well knew, been born and bred where Samuel Thomson was, he would have been just such another man; and had Samuel Thomson been thrown into the same society and associations as John Hunter, he would, in my opinion, have been his equal, with probably a wider range of thought; but both are men of talent and originality of thought."

Dr. E. M. Hale, professor of Materia Medica and Therapeutics in Hahnemann Medical College, in Chicago, writing at a later period, pays him this tribute: *

"This man, although uneducated, had in him the elements of a great reformer; and had he had the literary advantage of some of his allopathic persecutors, would have done more for the advance of medical science than most any other man of his day. Dr. Hollembaek declares that he was 'one of the greatest and best of medical benefactors, whose crude system of practice broke the mysterious chains which had bound the people of America and Europe for about two centuries.' Certain it is that Thomson was the first to publicly attack Allopathy in America; and his attack may be said to be the first that shattered the foundations of that school, and made way for such scientific reforms as Homœopathy. In every state

* *New Remedies*, vol. 11, p. 432.

of the Union, the 'Botanic' practice of medicine preceded the Homœopathic, and broke down those legal barriers that Allopathy had placed around her. That order of practice is now nearly extinct * or has been merged into Eclecticism."

Such was the impression which Thomson made upon men capable of measuring his character and quality. Much stress has been laid upon his illiteracy, especially by individuals who forget that at that time few physicians, even in the favored school, were scholarly. Such criticisms have little weight with men who are really intelligent. These are generally willing to be just, and are desirous to find out merits rather than faults.

"He who aspires to be a reformer of physic," said William Harvey, three centuries ago, "must resolve to run the hazard of the martyrdom of his reputation, life, and estate." In the person of Samuel Thomson this was fully verified. It is a disgraceful fact in the history of medicine in America that he was not only defamed and vilely calumniated, but also persecuted with a malignity which no candid or honorable man can extenuate. "The little dogs, Tray, Blanch and Sweetheart," all barked at him. The ignorant accused him of witchcraft, while those of greater attainments sought to prohibit him from practice as not being of the favored school. Medical orthodoxy has always been as intolerant and bigoted as religious orthodoxy, and about as ready to torture and destroy.

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* This statement requires some qualification. There are yet several thousand physicians in the United States, known as "Botanic," "Reform," "Physiopathic," or "Physio-Medical," who are essentially Thomsonians. They have a National Association, meeting annually, with auxiliary societies in Illinois, Indiana, Iowa, Ohio and Washington, and medical colleges in Chicago and Indianapolis.

It was a literal copying of the examples recorded in the Gospels, in which the Pharisees vilified Jesus as casting out devils by the power of Baal-Zebul, and the Apostles themselves forbade a man because he was not of their company. (*Luke* ix. 49 ; xi. 15.)

Thomson was virtually outlawed. The professional craft of physicians and lawyers were opposed to him, and seem to have purposed that he should never receive just treatment, whatever the right of the case or evidence in his behalf. This appeared conclusively in 1809. Dr. Waterhouse attributed it partly to professional and partly to political spite. In a letter to Dr. Samuel L. Mitchill,* he says : "Dr. Samuel Thomson will deliver you this. He has cured and relieved many disorders which others could not—without being a diplomatized physician, and dared to be a Republican in a hot-bed of Federalism ; for which he has been shamefully ill-treated, even to persecution."

Dr. Waterhouse here referred to the indictment of Dr. Thomson on frivolous testimony for wilful murder. A Doctor French, in Massachusetts, had railed against him, even threatening to assassinate him, and had been placed under bonds for it to keep the peace. His next device, with several fellow-conspirators, was to compass Thomson's death behind the ægis of the law. Accordingly, in the late autumn of 1809, just as the Court then in session at Salem had concluded its business and was about to adjourn, an indictment was procured, charging him with the murder of Ezra

* Doctor Mitchill was a resident of New York and a Republican [Jeffersonian] in politics. He was a member of Assembly in New York in 1791, 1798, and 1810; and also of both the Senate of the United States and of the House of Representatives. He aided Doctor Thomson in procuring his patent.

Lovett, a patient for whom he had prescribed a year previous.

Dr. Thomson was arrested and incarcerated in the jail in Newburyport, in a cell without fire, abounding with vermin and reeking with foul and deadly vapors. Not a table, chair or stool was allowed him. Friends who visited him were actually made sick by the noisome atmosphere. Lest his death should ensue from their inflictions, an application was made to the Chief Justice, Mr. Theophilus Parsons, who accordingly held a special term of the Court for his trial. The prosecution failed utterly to make out a case. Dr. Howe, on whom the main dependence had been placed, produced a sample of the medicine which Dr. Thomson had administered. He testified that it was Lobelia, and a deadly poison; but he was unable to describe that plant or its actual properties. One of the attorneys for the defense taking the sample, ate it in the presence of the Court. It was shown to be *Statice*, or marsh rosemary. Even Dr. French, who had procured the indictment, acknowledged that Dr. Thomson had made cures, and that his medicines were harmless. Justice Parsons interrupted the proceedings and sent the case to the jury for an acquittal.

Indeed, it is plain that a trial of this indictment was no part of the plan of Thomson's enemies. The evident purpose was to imprison him for the winter, in the hope that he would die of privation and prison-distemper. Dr. Waterhouse tells the story of Thomson and the Chief Justice in a way hardly creditable to the latter.

"Samuel Thomson, like most reformers, has endured in our county of Essex as much severe perse-

cution as ever was perpetrated in it ; which is saying a great deal, when we call in mind the days of the delusion of witchcraft. Though capitally indicted for murder by using Lobelia, he was discharged without a trial, after something like a reprimand of the Solicitor-General, by the Court. Yet it is remarkable that Chief Justice Parsons deemed it worth while to write the report of it in the Sixth Volume of Tyng's *Collections*."

Indeed, it does not appear that Justice Parsons was at all impartial in the matter, or even that he dismissed the case willingly. The evidence against Dr. Thomson—part of it—was virtually suborned, if not absolutely perjured, and he affected to regard it as true, in default of his own intelligence. When Thomson afterward brought a suit against his chief adversary, Justice Parsons distinctly charged the jury adversely, and even went so far as to recommend application to the Legislature for a special enactment to deprive Botanic physicians of their legal right to remuneration for services. This would be a placing of the Reform Practice under a stigma, like negotiations for counterfeit money, or disreputable purposes.

This seems to have been the prelude to a legislative onslaught.

THE THOMSON PATENTS.

Occasion has been taken to decry Dr. Thomson for having procured patents for his medicines. "In England," says Dr. Waterhouse, "Parliament would probably have purchased the procedure by a liberal grant. In France, at least under the old *régime*, the King would have bought it. But we, wiser than any of them, have only tried to pick it to pieces." It is of little

use, to plead in one's behalf before a tribunal very certain to condemn him at any rate. Thomson was driven by flagrant injustice and persecution to seek the protection which the law afforded. He had learned by bitter experience to despair of fair treatment in the courts, and now he was further threatened with unfriendly legislation. The Patent Laws, there was hope, might give him adequate security. Accordingly, he made a journey to Washington in February, 1813. Aided by Governor Martin Chittenden, of Vermont, he prepared the required specifications, but he had much difficulty from the caviling and equivocation of Dr. Thornton, the clerk of the Patent Office, in regard to the proper naming of his medicines. Finally he succeeded in obtaining the instrument from the Hon. James Monroe, then Secretary of State.

He had, nevertheless, been in some way outwitted. Having brought a suit for trespass before Justice Story of the Supreme Court, the ruling was made that the specifications had not been made sufficiently explicit to found an action upon. A second patent was procured in 1823, in which Dr. Thomson had the aid of Dr. Samuel L. Mitchill, of New York. At the request and advice of the National Thomsonian Convention, he applied for its renewal in 1836.

"In obtaining a patent," he declared, "it was my principal object to get the protection of the Government against the machinations of my enemies, more than to take the advantage of a monopoly." He proceeds to justify his action as a recognized principle in business. "In all cases where a person possesses desirable information from his own experience or ingenuity, there can be no reason why he should not

have a right to sell it to another, as well as any other property."

A VISIT TO DOCTORS RUSH AND BARTON.

It was on his return from Washington, in 1813, with his first patent, that Dr. Thomson visited Doctors Rush and Barton, of the University of Pennsylvania. His errand was to confer with them upon the subject of introducing the Botanic Practice to the world. He seems to have been by no means overawed by their exalted professional standing, or to have expected any contention or essential difference in relation to his theories or procedures. He met with none. "I have found," he says, "that those practicing physicians who were really great in their profession, and have had the most experience, condemn as much as I do, the fashionable practice of the present day."

Doctor Rush received him with apparent courtesy, but pleaded the want of necessary time for any extended investigation, and referred him to Doctor Barton, the professor of Medical Botany. The latter was himself the author of a work upon the vegetable Materia Medica. He took samples of Doctor Thomson's medicines, and promised to make a fair trial of them, giving them such credit as he might find them to deserve. He freely acknowledged that no art or science was in a state so uncultivated as that of medicine.

Neither of these distinguished men seems to have taken exception to his action in procuring a patent for his medicines. His expectations from them, however, were never realized. Both Dr. Rush and Dr. Barton died not many months after these interviews.

Yet the endeavor was not without its fruit. Several leading physicians and professors gave their testimony in favor of his procedures; among them Professor Powell, of Vermont University; Professor William Tully, of Yale College; Professor George McClellan, of the Pennsylvania Medical College, and Dr. William Robinson. The latter was a friend of Dr. Rush. He became an earnest champion of the new doctrines, and both wrote and lectured in their favor. He declared positively that "Doctor Thomson had very much of Dr. Rush's qualifications for a physician—all, indeed, but his book-learning."

"FRIENDLY BOTANIC SOCIETIES."

Even before the war with Great Britain, and the crusade of unfriendly medical legislation which succeeded, Dr. Thomson had found it by no means easy to obtain a just remuneration for his services, either from professed friends, or by a suit at law. He devised the plan of organizing "Friendly Botanic Societies," in which the members were to be instructed in his procedures, and to pay him a stipulated amount, pledging themselves at the same time not to give the information to others except on certain conditions. It was purely a question of honor, and he often found them unwilling to keep their word. He prepared a little treatise setting forth his modes of treatment and the remedies, but with little better result. After procuring his patent, he revised his plan by making all who purchased a right members of the one and sole Friendly Botanic Society, with full liberty to communicate with one another. He was better satisfied with the later arrangement.

No exception was made on account of sex. Women

became members as well as men. When the further organization of societies in counties, districts and States took place, the same right of membership was recognized without question. This was the first acceptance of women in the United States as medical practitioners. This grain of mustard-seed was indeed a very humble affair, but it became the great tree for the birds of heaven to lodge in its branches.

PROSCRIPTIVE MEDICAL LEGISLATION.

"Many laments thou 'lt utter, and vain groans,
For unrelenting is the heart of Zeus,
And ever harsh is he whose rule is young."

—ÆSCHYLUS: *Prometheus.*

Zeus or Jove, newly placed on the throne of Heaven, we are told in mythologic story, sentenced Prometheus, the Titan, to crucifixion, because he gave fire and skillful art to men, and "thus betrayed his glory" to a hated race.

This was one of the former counts against Reform physicians. Thomson, Beach, Smith, and their followers were of and for the people, and sought to make known to them the ways to preserve and restore health. We may see the reason why the English language is proscribed in medical formulas, and terms elaborately coined are so much employed.

We are told again, that physicians "suspect every theory that proposes to conduct the cure of disease on a few general principles." However philosophic and practical this would be, it is not accepted as "professional."

John Wesley, commenting upon the ways of modern medical men, remarked that those who did not know their abstruse terminology, but "understand only

how to restore the sick to health, they branded with the name of *Empirics*." Thus a term which was once employed like the later one of *quacks*, to designate a School of Medicine, was degraded into one of opprobrium. Such has been the case in England, and the example has been imitated in the American states.

The next step was to invoke arbitrary legislation An application was actually proposed in New Hampshire for an enactment which should prohibit Samuel Thomson by name from treating the sick. The notion seems to have been entertained that a legislature had ample power to do whatever the majority decreed, however monstrous or unjust, even to changing wrong into right, and making of the Right a crime and misdemeanor.

When the Federal Constitution was submitted to the people of the several States for ratification, there were amendments also proposed, on purpose to secure its approval, one of which inhibited Congress from making any law "respecting the establishing of religion, or prohibiting the free exercise thereof." It was not imagined that any other than a religious body would aspire to such a recognition, or that a safeguard would be needed against other usurpations of a kindred nature. Yet, the question of personal rights and even of liberty of conscience, hardly appears to have been well understood. Several States continued to have their Established Church, which all were required to support.

Legislation was also pushed further, and laws were enacted ostensibly "to regulate the practice of medicine," but actually for the purpose of protecting the dominant school from innovation, and to suppress rival and competing practitioners. Physicians sought

to be elected to the legislatures on purpose to procure such measures, and their unwary associates readily, and even obsequiously, yielded to their wishes. After the conclusion of the war of 1812, this work was undertaken with redoubled energy. Laws were passed in the different States clearly resembling in spirit, as well as in form, those providing for the discovery and punishment of witches. From Maine to Georgia, medical proscription was the order of the day, and "Black Laws" were enacted in almost utter disregard of the common rights of human beings. In the zeal to imitate the arbitrary legislation of Europe, the right and obligation of contracts with proscribed physicians were set aside, as though heterodox views in medicine were immoralities. Thus, a Medical Hierarchy was established, and its ministers, the regular practitioners, so called, were invested with the dignity, the authority, and all the paraphernalia, except the gowns, of the repudiated priesthood.

This legislation, it need not be added, was enforced in the same spirit of malice and cupidity which had inspired the procuring of their enactment. The veteran Doctor E. J. Mattocks, of Troy, forcibly depicts the medical Inquisition and *autos-de-fe:* "Collect all the facts you may," says he, "and still you will be unable to give but a tithe of the malicious prosecutions, and in some cases, the imprisonment, these early pioneers had to suffer in consequence of their faith and practice. Such men as Wooster Beach, Elisha Smith, Samuel Thomson, Thomas Lapham, Cyrus Thomson, Ira Wood, A. N. Burton, S. W. Frisbee, Abiel Gardner, H. M. Sweet, John Wesley Johnson, and a host of others, could their voices be heard, would confirm my statement."

Such has been Medical History through the centuries, from Galen down to the present time—alike in Imperial Rome, Modern Europe, and Republican America. Like to it, as we see, is the history of Reform Medicine in the Nineteenth Century.

"The doctors were enraged at me for no other reason," said Samuel Thomson, "than because I had cured persons whom they had given up to die!"

THE LAST STRAW AND THE RESULT.

In 1827, the legislature of New York, at a special session, enacted an amendment to the medical statute, declaring that any person who shall practice physic or surgery, not being duly authorized by law, "shall be deemed guilty of a misdemeanor, punishable by fine or imprisonment, or both, in the discretion of the Court by which he shall be convicted."

The full scope of the proscription of this section is admirably set forth in the Reports of the Select Committee of the Assembly of 1830:

"Your Committee have searched, with some industry and care, and can find no statute of Great Britain, or any other State or country, of equal severity, with the last clause of the said twenty-second section of said Title Seventh. The only law which they can find bearing any resemblance to it is a statute of Virginia, by which *any slave, free negro or mulatto, is forbidden to administer medicine on pain of death.* Provided, that if such medicine is administered without any ill intent, or is not attended with any bad consequences, such slave is to be acquitted on trial, and not extending to any slave administering such medicine with the consent of the owner of the slave, and the consent of the master or mistress of the family; nor to any free negro or mulatto administering such medicine in any family, with the consent of the master or mistress

thereof. But our statute punishes the unlicensed physician, where his intention was good; where the medicine was administered at the request, and with the consent of the patient; where it produced no bad consequences, and afforded the intended and expected cure. It not only punishes the unlettered Empiric, and the Botanic physician, but the man of learning and science in his profession. He may have obtained diplomas from Leiden and Edinburgh, and from every medical college and every legally-incorporated medical society in the Old and New World, beyond the limits of this State; * he may stand first in the first rank of his profession, and he becomes a practicing physician in one of the counties of this State, and neglects for sixty days to unite himself with the medical society of the county, his license is forfeited, he is in some respects deemed an outlaw, may be convicted of misdemeanor, fined, and sentenced to a dungeon.

"So that our free white male citizens, learned and unlearned, are treated with greater severity by our statute than are the free negroes, or even the slaves, of Virginia, by the laws of that State."

The same spirit and disposition which had inspired the application for such a statute was fully exemplified in its enforcement. The Medical Inquisition was established, and the Reform physicians were outlawed and placed at its mercy. Every medical society in the State became virtually a police station, to which resorted spies and informers to communicate evidence for prosecutions. Immediately began the hunt and the havoc. Many practitioners were arrested and fined, many were fined and imprisoned for two months. In this latter number may be enumerated several members of the famous family of Sweets, the

* Compare *Federal Constitution*, Article IV., sect. ii., subd. 1: "The citizens of each State shall be entitled to all the privileges and immunities of citizens in the several States."

"natural bone-setters." Their art and skill had been eagerly sought by generals in the Revolutionary war when the army surgeons failed; but in this medical war such considerations were of no account.

The sentence of outlawry thus passed by the legislature upon Reformed physicians, and the atrocious persecutions which followed, had the effect to determine them to concerted endeavors for a restoration to the common rights of free-born citizens. Dr. Elisha Smith, wary and far-seeing, counseled organization and the adoption of a better standard of scholarship. This would enable them to meet their enemies upon common ground, as peers in learning as well as in natural rights. It was no longer safe to indulge in jealousy and prejudice, giving the assailants opportunity to attack them, one by one, and destroy them utterly. He organized the New York Botanic Med ical Association, and took measures to establish a school for instruction in medicine. Dr. Wooster Beach and his friends adopted a similar course, opening the "New York Medical Academy," and forming the Reformed Medical Society of the United States.

JOHN THOMSON.

The foremost and most energetic to raise the standard of opposition to the pernicious legislation was Dr. John Thomson. He was a man of indefatigable energy, and sagacious to perceive the true policy, to attack the adversary at the point where he was the most vulnerable. Coming to Albany in 1824, he came in contact with the peculiar restrictions of physicians. One was that a practitioner, duly legalized by the State of Massachusetts, was not a lawful physician by the law of New York, even when of the privileged

school. He was also told that his father's patent could not be entailed on the children. When the legislation of 1827 had placed the Botanic and other practitioners outside of the protection of the law, making statutory criminals of honorable and worthy men, he determined upon appealing to the People to right the wrong. From that time he spared neither effort nor money to secure the repeal of the obnoxious measure. To him and his fellow-laborers is chiefly due the reäctionary legislation which began in New York in 1830, and extended to the other States, with the result of eliminating the proscriptive measures from all the statute-books.

It certainly appeared like a hazardous, unpropitious undertaking. It seemed as though the doctors had cowed the members of legislatures till hardly a man dared open his mouth or peep. "This barbarous law we declared war against in 1828," said he, "and so great was the public prejudice against us, that it was with much difficulty that we could find a member who had independence enough to present a petition to the House for us." It was done, however, on the 17th of January, the name of John Thomson heading the first one offered. Others followed from twenty counties, showing that there was a constituency in favor of repeal, and that the reäction had begun. The next year the effort was renewed, and petitions numerously signed, were presented from half the counties of the State, asking the repeal of the medical prohibitory law.

At this time a significant political movement was agitating the State. The abduction of William Morgan, and his myterious disappearance, had produced a great excitement, and under the lead of Myron Holley, of

Rochester, an Anti-Masonic party had been formed, which carried the elections in the principal western counties. Many of the members of the legislature of 1830 became afterward men of distinction in the State and nation; among them Millard Fillmore, Francis Granger, Thurlow Weed, Nathaniel P. Tallmadge, Luther Bradish, Abijah Mann, Jr.; George H. Davis, Stephen Allen, Alonzo C. Paige, Andrew B. Dickinson. The Speaker, General Erastus Root, was warmly in favor of Liberal Medicine. It has been the practice in the Assembly of New York for the Speaker to constitute the Medical Standing Committee entirely of physicians. It was so uniformly done, as to be considered almost as an unwritten law. Only Henry J. Raymond, in 1861, ever purposely set it aside. A committee, thus virtually packed, is an important factor in a legislative body. It gave the Medical Society of the State the opportunity to influence materially, and even to control the action of the Assembly upon medical questions. Nobody had ventured to question its prerogative. Having a giant's strength, it had used it like a giant. This accounts for the severity of the medical proscription in the State of New York. Similar influences had been employed in other States, and with like result.

In 1830, the Assembly authorized the appointment of a Select Committee on the Botanic Practice. Mr. Dickinson, the Chairman, made an elaborate report setting forth the injustice of the law, the right of every man to select his own physician, and the impropriety of arbitrary legislation.

"If the physician is distinguished," it says, "by his superior intellect, his superior virtue and attainments in medical science, a discerning people will discover it,

and he will receive the rewards of an extensive and successful practice, which he would never obtain by binding and imprisoning his humble opponent. The strife of the professional man, ennobled by genius and talent, and exalted by virtue, is generous and noble ; and he needs not, *he asks not*, the aid of severe laws to insure it."

The committee, accordingly, reported a bill to repeal the inhibition and penalties, which passed the House by a vote of 74 to 27, and the Senate, 17 to 5. It was promptly signed by Governor Throop. "That law," says John Thomson, "cost me three sessions' perplexity and hard labor, and upward of one thousand dollars in cash, expended."

The victory, however, was by no means final. The State and County Medical Societies were three thousand strong, and now put forth prodigious efforts to recover their lost supremacy. The staple pretext was employed, which has since been reiterated, that the physicians were not laboring selfishly for their own emolument, but for the protection of the people from quackery. Nevertheless, few except the members of medical societies signed petitions for their proscriptive measures, while the remonstrances bore the names of tens of thousands. On the 28th of March, 1832, the Hon. Francis Granger presented the petitions of John Thomson and fifty thousand others, inhabitants of the State, asking equal legislative protection for the Botanic practice. The population of New York was then about two millions.

OTHER STATES.

Similar efforts for equal rights before the law were made by Reform practitioners in other States, and with encouraging results. The invasion of Asiatic Cholera,

which was experienced for the first time in America, had been a powerful agency in their favor. The legislature of Ohio, in February, 1833, repealed her medical act. Other States went even further. The legislature of Alabama passed a bill expressly declaring its purpose to be the upholding of the Botanic practice. The next winter witnessed a similar measure in Mississippi.

The legislature of Indiana, having convened in January, 1834, a member of the House of Representatives, himself a physician, presented a bill in the usual form, to prohibit Botanic physicians from receiving compensation for their services. It was summarily rejected by a vote of forty-five to thirty. The Western States, as they were then classified, were unanimously on the side of equal rights before the law for medical practitioners. They further showed it by the appointing of several Reform physicians to official positions.

CONFLICT RENEWED IN NEW YORK.

The medical leaders in New York chafed over the liberal legislation of 1830. In 1832, when the cholera first invaded the country, although the Reformed practitioners were successful beyond others in its treatment, panic as well as organization enabled their adversaries to procure the election of fifteen physicians to the legislature that autumn, and twice that number the following year. They set about to regain their lost ground. They employed the procedure now almost universal, to make use of the forms of law to destroy the substance of liberty. Dr. Barent P. Staats, of Albany, took the lead, and introduced a bill in the Assembly, early in the session, for the

repeal of the Act of 1830. The friends of impartial liberty opposed this retrograde policy by every reasonable argument, without avail. Mr. Mordecai Myers declared the restricting of medical practice to be an infringement of public rights, and that it curtailed the right of every man to exercise his knowledge or his skill for the benefit of his species; while professional skill, licensed or unlicensed, always would and ought to command a preference. The regular practitioner, if really qualified to practice in his profession, would never need the aid of legislative protection.

Mr. Haskell took the ground that a law that restricted the practice of medicine to any particular class of persons was unconstitutional; and quoted the veto of Governor Pope on a bill containing similar restrictions as creating a sort of "intellectual aristocracy."

The bill passed the Assembly, and was favorably reported in the Senate. The debate upon it was characteristic. Among the advocates of restrictive legislation were Messrs. Albert H. Tracy, William H. Seward, and John W. Edmonds.

One Senator, a Mr. Macdonald, declared himself in favor of prohibiting the use of vegetable remedies entirely, and denounced the Botanic practitioners as being very often destitute of even an elementary education. Mr. W. H. Seward demanded a strict law to protect the public.

The opposing Senators were equally forcible in their rebuttals, and from being in the right of the issue, were in consequence more eloquent. Mr. Kemble declared that if a law was to pass forbidding physicians to practice, who had no diploma, there ought likewise another to be enacted to define which physicians, among those who had diplomas, were

capable practitioners; for very many of the licensed practitioners knew little of the business.*

The bill passed the Senate by a vote of sixteen to fourteen, and was approved by Governor William L. Marcy.

Thus, the long step backward was taken. The medical societies had triumphed. The members of legislature professing liberality beyond preceding bodies, had yielded in a point vital to liberty itself.

Judge Haskell described the object of this legislation to be: "To proscribe all *undiplomatized* Botanic practice, however scientific; and to bolster up diplomatized practitioners, however ignorant of the science of Medical Botany; and also to facilitate the attainment of the purpose of confining medical teaching to incorporated medical schools and colleges, and to the professional men connected with them." This, he declared, was "a measure not so certainly calculated to facilitate the attainment of medical science, as to subserve the exclusive interest of those exclusively privileged to practice physic and to become medical teachers." He questioned the right or policy, "by which a *self-taught* medical practitioner, professor or teacher, is refused an examination, rejected as a quack, and regardless of his qualifications, however learned and competent he may be, prohibited from

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* Judge Griffin, in his argument, quoted a conversation of the Emperor of China, who, having heard that in England the physicians were paid for their visits, besides the medicines, inquired:

"Did the patients ever get well?"

Being answered that they did, he asked again:

"Are there not constantly great numbers who are permanently crippled and diseased?"

He was told in reply that this was indeed the case. He rejoined, that with that system it would always be so. *His* physician was paid only for the time he was in health.

exercising his profession, *because, and only because* he chose not to study under a privileged teacher, or happened to be too poor to encounter the cost of an attendance at an expensive incorporated institution."

A few days after the passage of this act, Dr. John Thomson was asked to go fourteen miles to visit a patient. He was presented two dollars for this service. Dr. Staats inquired the matter out, and made a complaint, and Thomson was tried and fined. At the instance of a few hundred professional men, desirous of special privileges, there had thus been disregarded the rights of as many more, and the prayer of more than one hundred thousand petitioners. "To the everlasting scandal of the learned Faculty," said the intrepid Lapham of the *Thomsonian Recorder*, "in any State where any law has existed, or does now exist, regulating medical practice, it has never originated with the people, but with a class of men who subsist on the miseries of the people. Fines, prisons, dungeons, chains and death are accounted better security to their standing than all the combined skill and wisdom of all the ancient schools of Medicine."

To submit in silence would have been equivalent to confessing the legislation and penalties just. A State Convention was called at once. The note of warning was sounded all over the country. The response was prompt, the language resolute and determined. "Be assured," Charles Thompson once wrote to Dr. Franklin, "we shall light torches."

ALABAMA AND HER WATCHWORD.

The Medical Botanic Society of Alabama at once issued an Address to the People of that State declaring the enactment in New York "the most infamous

that ever disgraced a statute-book." It added the honest boast, that in Alabama the people were freemen, and acted as such, having no legislative enactments to enable a few lordly aristocrats to live in luxury on honest industry.

"Let the example of New York be a warning and a watchword," said the Address; "and if it be known to any member of this Society that there is a candidate for office who is in favor of establishing a privileged order of physicians, let him speak. For it is in your power, by dropping all minor considerations of party, to ease him of the heavy burden of public employment.

"All other subjects sink into insignificance compared with this. When the ministers of death apply for exclusive privileges, sound the tocsin: 'New York!'"

CONVENTION OF MEDICAL PROTESTANTS.

Nor were the Medical Reformers of New York silent or quiet under the legislative decree of outlawry. Immediately after the Statute of 1834 had been signed by Governor Marcy, a State Convention was called to take the matter into consideration. It met at Geddes, on the first of September, and promptly resolved to keep up agitation, and to continue to memorialize the legislature for just treatment. A series of resolutions was adopted pledging the members and their constituents to use all laudable endeavors for such equalizing of legislation, so that every school of Medicine should rest on its merits, instead of being bolstered up by legislative favor.

"Better to have no laws regulating the practice of medicine," one resolution expressively declared, "than to place all power in the hands of a privileged few,

and those using the most dangerous poisons as medicines."

The following significant declaration was also subjoined: "That we consider a free people as competent to select their physicians as to elect their legislators; and every law preventing the same charges the people with ignorance, and infringes on their rights."

The policy thus announced met with an echo in every part of the country.

Conventions were held at Jackson, in Louisiana, and Indianapolis, in Indiana, at each of which a state society of the Reformed School was organized.

TABLES TURNED AGAIN IN NEW YORK.

The election of 1834 placed a more liberal body of men in the Assembly of New York. Mr. Seward had been defeated for governor, and several other adversaries of Botanic Medicine had been replaced by others who were friendly. The Reformed physicians of the New York School had also petitioned the legislature, and appeared in behalf of the repeal of the obnoxious laws. This year Mr. Job Haskell was elected to the Assembly. At the instance of Dr. Wooster Beach and Dr. Isaac S. Smith, Dr. Thomson concurring, he was selected as the champion of the Reformers. That year the petitions were presented by scores, coming from all the principal counties of the State, signed sometimes by hundreds, and several exceeding a thousand. There were forty thousand petitioners. Mr. Haskell asked that they be referred to a Select Committee, and secured it by a majority of two.

The report was presented on the 16th of February. It boldly declared the law permitting a Botanic practitioner to administer medicine, but prohibiting him to receive compensation, an anomaly in legislation. The Committee had not been informed of any ill consequences resulting from the practice of any such physician to justify this forfeiture, by legislative enactment, of the immunities enjoyed by his fellow-citizens. There is a provision in the Divine Code that "the laborer is worthy of his hire," which has so much sacredness, that it should stay every effort of legislation to reduce it to a dead letter.

In short, the Committee reported that they had found nothing to justify a continuance of the laws "regulating the practice of physic," as they now existed. The petitions before them, thus numerously signed, showed that the public mind was excited on the subject. All history shows that when the people are stirred up it is not commonly the result of imaginary causes. An instance of recent occurrence in Western New York [the abduction of William Morgan,] demonstrated that the people in their strength are not to be disregarded with impunity.

The Committee criticised the extensive vending of the Thomsonian patent without regard to the qualifications and character of the purchaser; which had resulted in the starting into notoriety of a "mushroom phalanx consisting of the old and the young, and of both sexes, till then only distinguished by their ignorance and obscurity." But the fault did not lie in the system itself, and the discreet and experienced Botanic practitioner was among the severest sufferers from this cause.

Finally, if the existing laws regulating the practice

of physic were necessary, as regards the encouragement of science and the protection of the Faculty, the Committee did not perceive any good reason why the fair Botanic practitioner was not entitled to equal protection, nor why this branch of medical knowledge and improvement might not receive the same encouragement.

The alternatives between no law and the law in force, constrained the Committee to prefer the former as the lesser evil. In Pennsylvania, the Medical Faculty had never enjoyed the monopoly of a privileged order protected by law; and in Ohio the medical profession had been left to stand on its own merits, without a legislative nurse or legal restriction. The Committee were clear that it would be more discreet, as well as more republican, to leave the whole matter to be regulated by public opinion, and place both orders of practice upon the same footing, leaving the field of benevolent competition open to both. They accordingly introduced a bill to repeal the statute of the previous year, and authorizing any one to apply Botanic medicines for the benefit of a sick person, and to collect or receive a reasonable compensation for medicines, attendance and services.

When the bill was considered in Committee of the Whole, Mr. Haskell made a very forcible speech, reviewing the medical legislation of New York from 1760, in the Colonial period, and declared that it disfranchised respectable physicians and established legal quackery. He added, with peculiar significance, that it showed that the Botanic practice was considered safe, and that the Mineral Doctors were not afraid that the people would be injured by it; but that the only crime in their eyes, for which the

Botanic physician ought to suffer, was the receiving of the fee.

Dr. Isaac S. Smith, of New York, described the effort in glowing terms: "He made a stirring speech on the subject of the unjustness of the existing medical laws. I was present, and well remember him as he stood upon the floor, with Dr. Wooster Beach's book in one hand and my father's in the other. His language was bold, defiant and eloquent, and at intervals the hall fairly shook with applause."

The Assembly, however, struck out the section recognizing the right of Botanic physicians to compensation. The bill was then passed and became a law.

Several of the friends of Dr. Thomson were chagrined at the prominence given to the works of Dr. Beach, and his medals from the various sovereigns of Europe, and the lower estimate placed by Mr. Haskell upon their system. This, however, was probably a parliamentary necessity. Literature is essential to the existence and success of any movement, and illiteracy is a fearful drag-weight upon any enterprise. It is due to Dr. John Thomson, however, to state that he was awake to this fact. He set himself vigorously, to the great discomfiture of his father, to remedying this deficiency. It made a new departure for the school of which he was one of the brightest luminaries.

THANKS TO ASSEMBLYMAN HASKELL.

The passage of the Haskell bill was treated in Reform circles everywhere, with warm delight. It was not only a long step in the way of justice, but it showed that by organized effort and a waiving of pro-

fessional jealousies, the reformers could win. A victory in New York was a victory for the whole country, and it gave a new impetus to effort elsewhere.

The Botanic practitioners of the city of New York, held a meeting on the 5th of May, 1835, at No. 95 Eldridge street, to acknowledge the services of their champion in the legislature. Dr. Wooster Beach was elected chairman. A series of resolutions were presented and unanimously adopted. We give a copy of the first.

Resolved,—That the Botanic physicians of New York entertain a just sense of the important services rendered by the Hon. JOB HASKELL, on the floor of the legislature of this State, vindicating the rights of his fellow-citizens from the unjust, arbitrary and unconstitutional laws relating to the practice of physic and surgery, that have so long disgraced the statutes of this state

ORGANIZATION.

The necessity of organization was easy to perceive. To divide the adversaries and conquer each division in turn, often with the help of some of its rival factions, has been a frequent strategic policy. The fierce contentions between the various Reform forces in medicine, were often more perilous than the iron hand of the dominant school. A cordial union of the Thomsonian with the Reformed school, and of the Homœopathists with the Eclectics, on a fair and liberal basis of common justice and fraternity, would have long since divested medical monopoly of its supreme power in the legislation, jurisprudence and political patronage in the United States. There were men wise to apprehend what might be secured; there were those too, who were ready on various pretexts to

promote discord, as if preferring dominion in hell to service in heaven.

The Reformed physicians of western New York appear to have taken the lead in endeavors to secure united action. In that region, Botanic practitioners, the disciples of Samuel Thomson and others, were numerous. Every proscriptive act of legislation was a signal for launching upon their heads the bolts of remorseless persecution. They were thoughtful and self-reliant men, and the law of 1827, conceived of the spirit that outlawed the New England patriots of 1774, aroused them to vigorous action.

A meeting was held at Rochester, on the twenty-third of January, 1828, at which was formed "The Reformed Medical Society of the State of New York." The constitution tersely set forth as its objects: "To improve the practice of medicine, encourage the employment of herbaceous remedies, undertake the repeal of unjust laws restricting the practice of medicine, which were passed at an extra session of the legislature in 1827, and to diffuse knowledge among the People for their enlightenment upon medical subjects."

This was the first of the several Societies formed to represent and combine the Reform physicians of the State of New York. It set about its operations with great energy. Concert of action was established, and the sentiment of the community in western New York soon began to favor the New School of Practice. The president, Dr. Daniel J. Cobb, published a journal for several years, entitled *The Botanic Sentinel and Enquirer.* Auxiliary societies were formed in many of the counties. In addition to these were several independent organizations; among them the "Genesee Union

Botanic Society," formed at Port Byron, in 1832, the "Reform Medical Society," at Conesus, in the same year, and two others, each bearing the name of "The Reformed Medical Association of Western New York," one at Dansville and the other at Fredonia.

These Societies continued in active existence for many years, co-operating with great cordiality in the promulgating of their doctrines, petitioning the legislature and in various ways upholding the cause. At a later period they were merged into the Eclectic organization.

THE FIRST NATIONAL ASSOCIATION.

In 1829 a national association was formed in the city of New York, called the "Reformed Medical Society of the United States." Dr. Wooster Beach was the president of this organization. He was at this time very enthusiastic of the immediate success of the cause. There were enlisted with him several young men, graduates in medicine and otherwise well educated, who were in warm sympathy with his doctrines and ambitions. Of this number, two were conspicuous beyond others: Thomas Vaughan Morrow and Ichabod Gibson Jones. With such auxiliaries as these Dr. Beach aspired to extend his field of operations to the West and South, the outermost limits of the twenty-four states of the American Union. A circular letter was prepared and copies sent to prominent individuals living in the valleys of the Ohio and Mississippi. It speedily resulted in a correspondence with Colonel James Kilbourne, of Worthington, Ohio.

WORTHINGTON AND ITS COLLEGE.

The town of Worthington had been laid out in 1803, by Colonel Kilbourne, of the Scioto company, and

colonized from the state of Connecticut. Ohio became a state at this time, and the purpose was fondly cherished to procure its selection for the capital. These hopes were disappointed. A little while afterward, dissensions arose in Kenyon College, and its retiring president, the Rev. Doctor Chase, obtained a charter for a rival institution at Worthington. It began its career with glowing expectations, but the election of Dr. Chase as Bishop of Illinois, and the adjustment of the controversy in the Protestant Episcopal Church, was followed by the closing of the new college.

In this condition of affairs, the proposition of Dr. Beach to establish a Reformed medical school was readily accepted, and an act was obtained from the legislature to establish a medical department in the institution at Worthington.

This was the first institution of the Reformed School that was recognized by a legislative enactment. Even the colleges of John Hunter, and other distinguished instructors in England, were only private ventures. Their terms of study lasted about six weeks, and their diplomas conferred no legal authority.

Doctor Morrow was selected by the Reformed Medical Association, at its meeting in New York, to organize the new institution at Worthington, and to be its president. The college was opened in 1831, and held two terms each year, covering a period of ten months. This was somewhat longer than had been usual in schools for medical instruction. Indeed, at that time, the illiteracy of medical men in the United States was but too common, and the proportion that had never been students at a medical college was

exceedingly large. The professors at Worthington were obliged to adopt a medium policy between the condition of facts as it was, and the higher standard at which they aimed. They appear to have had no specified requirement for attendance at lectures, as a condition of graduating. Any student might receive the degree of Doctor in Medicine, who could satisfactorily undergo the examinations.

Worthington College had numerous foes and difficulties to encounter. The physicians of the region were, to a man, vindictive and unrelenting in their hostility. The disciples of Dr. Thomson added their criticisms, denouncing the doctrines as mongrelism, and as having been in a large degree plagiarized from their school. The warfare was characterized by all the animosity so general between individuals largely agreeing in principles, but at issue in details Leaders of a party, and partisans of a point of doctrine, are bitterly hostile, and sometimes even murderously cruel, to those who do not subscribe unquestioningly to their opinions or authority. The fate of Michael Servetus is significant in the history of modern Protestanism. When the prisons of London, in the reign of Mary Tudor, were filled with Reformers awaiting trial, and death by burning at the stake, many among these were eager to proscribe others of their own number as heretical and reprobate, for not concurring with their belief on certain dogmas of religion.

The early reformers in medicine appear often to have been inspired by a similar disposition. Wooster Beach and Elisha Smith had each a Medical Society in New York, one assuming to be national, and the other embracing the State. In 1832, Dr. Thomas

Hersey, a veteran physician of superior ability, who had embraced the doctrines of Samuel Thomson, established at Columbus, a monthly periodical, *The Thomsonian Recorder*, for their promulgation. He was a bold and vigorous writer, resolute of purpose, and zealous in controversy.* He seems not to have long delayed in turning his weapons upon the physicians of the college at Worthington. Dr. Alva Curtis became a contributor to the *Recorder*, and subsequently succeeded as editor.

About this time occurred an episode, perhaps the first of the kind ever coming to light in the United States. A charter for the "University of Indiana," and the "Christian College," at New Albany, had been conferred by the Legislature in 1833. The mover in the matter, and the titular president, or chancellor of the institution, was one John Cook Bennett, afterward attaining notoriety from his relations with Joseph Smith, the Mormon Apostle, in Nauvoo. The institution did not go into operation, but its degrees were distributed wherever individuals could be induced to accept and pay for them. Bennett visited Worthington and attempted to vend his commodities among the students. He boasted that he had conferred them on the professors, naming Dr. Morrow, but this was shown to be a slander. He next attempted to procure a charter from the legislature of Ohio, but the fact that he had been engaged in the selling of diplomas was set forth, and the application was refused. Bennett afterward, for a brief period, held a chair in the Willoughby University, and a few years

* Dr. Hersey afterward repudiated the exclusive notions of Dr. Thomson, and became an advocate for the union of all the Reform Schools.

later in the Botanico-Medical College. This affair served a purpose in giving enemies a cue for calumniating Reform institutions, thus to divert attention from the fact that diploma-selling was a feature in other medical colleges, both in the United States and in Europe.

In 1836, Dr. Morrow and his colleagues established the *Western Medical Reformer*, to support their enterprise. In the prospectus, it significantly proclaimed its adherence to Scientific Medical Reform as promulgated by Dr. Wooster Beach—"Not to cultivate the idea of a fixed or routine system, but to relieve the mind from the dogmas of creeds and systems, the philosophy of medical schools, as these were then taught, and to direct it into an unlimited field of inquiry." Referring to the various limited schemes proposed for the acceptance of mankind, it predicted that they "must, as a matter of course, be ephemeral in their existence and extremely circumscribed in their operation." It further declared that, "there is no effort making to reform the abuses of the Healing Art by men of liberal scientific attainments as a body, with the exception of the Reformed Medical Society, and the advocates of a reform based on enlightened and philosophic principles. It is worse than folly for men, who are themselves ignorant of the very first principles of Medicine, to talk about reforming and revolutionizing the Science."

This language appears to have been a taking up of the gauntlet which had been thrown down. The point at issue was the allegation of Dr. Thomson and his friends, that the Reformed physicians had plagiarized his methods and remedies; while Dr. Morrow strenuously asserted that there was no connection

between the two schools, that the Reform System originated even before that of Thomson was known, and had been improved and developed without reference to it, and for the most part, without the knowledge that Dr. Thomson and his system even existed.

The severity of language and vituperation on both sides of this controversy reflect little credit upon either party. They are closely related to the disposition that in previous centuries made the torture-chamber, and the penal fire the final resort; and truth is not furthered by them. Our eyes should be open to others' merits rather than to their faults.

THOMSONIAN NATIONAL CONVENTIONS.

The *Thomsonian Recorder* was begun by Dr. Thomas Hersey, on the 15th of September, 1832. Its prospectus declared its purpose in no equivocal language. It arraigned the press of the United States for the delinquency of its conductors in persistently publishing notorious calumnies of Dr. Thomson and his Botanic Practice, and at the same time excluding every thing in defense. He charged this upon the Medical Faculty, who vainly imagined themselves to be the only rightful oracles of Medical Science, and never failed to unite their influence for the destruction of any man or system that exposed the effects of their practice. The different Medical laws then in force, Dr. Hersey boldly declared, were disgraceful to the legislatures that enacted them. But, he significantly added, there was a point beyond which oppres sion cannot be endured.

In the first number of the *Recorder* was published a call by Dr. Samuel Thomson for a "United States

Thomsonian Convention" of delegates from the "Friendly Botanic Societies," to meet at Columbus, in Ohio, on the 17th of the ensuing December. Few *National* Conventions of any kind had ever then been held in the United States. They were a new departure in politics, and Dr. Thomson now began a new movement in action among medical men. He simply announced a desire to meet his numerous friends, and to obtain from them their knowledge in regard to medicinal plants, remedial procedures, and the general progress of the cause of Botanic Medicine.

At a later period he stated likewise, that the purpose was to communicate further with his friends in different parts of the Union in reference to the Asiatic Cholera, and its proper treatment.

Many physicians were present on this occasion who afterward became prominent teachers of the new doctrines. Dr. Alva Curtis, of Richmond, in Virginia, sent a communication, setting forth his remarkable success with the Thomsonian procedures. Of two hundred patients, he had lost but one; and several were in the stage of collapse with cholera. Others present had like testimony. The treatment by the physicians of the dominant school had been marked by extraordinary fatality; that of the Thomsonians by almost unanimous recoveries.

This Convention gave great encouragement to the Botanic practitioners. Resolutions were adopted in respect to the proscriptive legislation in the several States. Concerted action produced its results. The legislature of Ohio met a few days afterward and repealed its medical act; and Alabama also extended to Thomsonian practitioners the same rights as were enjoyed by other physicians.

The second "United States Thomsonian Convention" was held in Pittsburg, in Pennsylvania, in October, 1833. Its action was as decided as the other. "It gave an impetus to the cause, before unbeknown." It was agreed to hold annual meetings thenceforward. "So long as National Conventions are well attended and properly conducted," said Dr. H. Wood, of Columbus, "they will continue to be the most powerful engine to advance our cause, and will enable us more successfully to combat with our enemies. Much good has already been accomplished by them, and much more remains to be done. Upon them mainly depends the success of our cause; and it is by them only that we can maintain that concert of action so necessary to effect any object." At this meeting a permanent organization was accomplished.

The enterprise was also attempted to establish a "National Thomsonian Infirmary," at Baltimore. A committee was appointed to procure an act of incorporation from the legislature of Maryland, a bill prepared, and introduced into the House of Delegates. It was favorably received by that body, but met in the Senate the full force of the hostile medical profession of Baltimore and the State. The controversy of Dr. Curtis and Dr. Williams about the measure was one of the chapters in the medical history of the time; and exhibited the implacable hostility and sordid motives then rampant and supreme.

Infirmaries for the reception of the sick and clinical instruction of medical students, were a characteristic feature of the early Reform Practice. Dr. Wooster Beach began his career in New York as an instructor in medical knowledge, by opening an Infirmary at No. 95 Eldridge street. From this modest beginning was

developed the Medical Academy and afterward the Reformed Medical College, from which the institution at Worthington had its inception. Dr. Benjamin Thompson* also established an infirmary in Boston, where he barely lost one patient in more than one thousand. When the Asiatic Cholera prevailed in Boston, in 1834, he attended about half of those attacked by it, every one of whom recovered. He afterward removed to Concord, in New Hampshire, where he had a large field of operations and even greater success. The Hon. Isaac Hill, Governor and United States Senator, became his warm friend.

Dr. Samuel Thomson afterward opened an infirmary in Boston. Among other similar institutions were those of Dr. Tatem at Norfolk, in Virginia; Dr. Gregory at Montreal, in Canada; Dr. Alva Curtis at Columbus; Dr. Hiram Platt at Hartford; Dr. John Thomson at Albany, Dr. Thomas Lapham at Poughkeepsie; Dr. Abiel Gardner at Hudson; Dr. E. J. Mattocks at Troy; Dr. Samuel Tuthill at Kingston; Dr. William Jones at Haverstraw. These were but a small part of the whole number, and they had a powerful influence to make the Reform practice popular.†

The Third United States Thomsonian Convention assembled at Baltimore on the 13th day of October,

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*Dr. Thompson was a disciple of Dr. Samuel Thomson. He is represented by a writer in *Appleton's Cyclopædia* and his copyist in the *Encyclopædia Americana*, as the founder of the Thomsonian practice in America, and one of the oldest members of the Eclectic School! Ecclesiasticism is seldom more untruthful or more ridiculously absurd. The publishers seem disposed to perpetuate the error by persistently neglecting to correct it.

†At the same period, the report of Dr. J. H. Miller, of the Baltimore Almshouse, was published, in which was contained the astounding statement that institutions of this character were "known as the Portals of Oblivion into which are thrown many of the 'victims of malpractice.'"

1834, and remained in session four days. In the absence of the president, Dr. Samuel Thomson himself opened the meeting. The address for the session was delivered by Dr. H. Wood of Columbus, Ohio. The document known as the "Test Resolution," adopted at the previous meeting,* was then presented and signed by all who participated in the proceedings. A code of By-laws was adopted and much important business transacted. Reports were adopted asking Dr. Thomson to renew his patent and the copyright of his *Guide to Health*, "for the preservation of the exclusive right of preparing and using the medicines in said system, and also to prevent any trespass on the same." An address to the People of the United States was also issued, and a resolution adopted to present copies of it, with Dr. Thomson's treatise, to the president of the United States and to the Governors of the several States of the American Union.

DIVISION OF THE THOMSONIAN SCHOOL.

Another resolution contained an acknowledgment of the services of Dr. Samuel Thomson, with the significant suggestion: "That he will warn his friends against being jealous of each other, and not to indulge in a mercenary or proscriptive spirit to the injury of the great cause which they have espoused."

There were heart-burnings smouldering in the bosoms of many in the ranks. There was a disposition to resent the claims of Dr. Thomson himself to be the umpire of what was genuine and what was heterodox in the views of others. He was dictatorial

*This resolution prescribed that no member should use as medicine any animal, mineral or vegetable poisons, bleed or blister, or use or sell any compounds the component parts of which are kept a secret, or any other article contrary to the principles laid down by Dr. Samuel Thomson.

of temper, and jealous of every individual differing from him or disposed to question his ascendency. He was uneducated and distrusted educational institutions and educated men as certain to complicate and transform his system. For a time he was in controversy and estranged from his own sons on these same grounds.* It was apparent that the Thomsonian physicians could not be held together by any arbitrary test, but must inevitably divide, and to a considerable degree modify their procedures, to accord with their change of views.

The annual conventions were held till 1838. That year the meeting was at Philadelphia, and Dr. Thomson made the annual address. He was conscious of the diverging sentiments that were springing up in the ranks, and that many who were reckoned as his followers, were transcending the boundaries till they could hardly be regarded as his disciples. He gave a history of the several conventions and the difficulties which had been encountered, closing with the sentence:

"With these considerations and with no other object than the permanent good of us all, so far as my System of Practice can contribute to that end, I ask that this Convention may be forever dissolved."

The Convention, however, did not adopt the motion and the formal division which he had forseen took place. Dr. Alva Curtis, of Ohio, and his friends formed a new organization, styling it the "Independ-

*The *Botanic Watchman*, of January, 1834, published by Dr. John Thomson, contained a card with this notice:

"This may certify that all matters in controversy between myself and my son, Dr. John Thomson of the city of Albany, have been this day amicably settled, and I have appointed him my agent.

"SAMUEL THOMSON.

"Albany, Dec. 24, 1833."

ent Thomsonian Botanic Society." Those who adhered strictly to the doctrines and procedures laid down by Dr. Thomson organized as the "United States Thomsonian Society."

Both held their annual meetings the next year in the city of New York. The Independents met on the tenth of September, and in the absence of Dr. Curtis, their president, made choice of Dr. Thomas Lapham, the editor of the Poughkeepsie *Thomsonian*, with Dr. John W. Johnson, of Waterbury, in Connecticut, for secretary. The Botanic State Societies of Connecticut, Maryland and Rhode Island announced their adhesion to the new organization. The Society of Maine, which had been formed the previous year, and the State Society of New York, the members of which had been prominent in the discussion, made no demonstration, but left their members free to affiliate as they chose. An address was issued setting forth the position of the Society. The attempt to dictate was distinctly repudiated and the reason given in these terms :

"Circumstances, personal and local, which we have long regretted and endeavored in vain to remedy, have compelled those who desire the progress of Reform upon true principles, to assume a name for themselves, unshackled by any influence that would prevent improvement."

Then, as though their opposition was not in any way a departure from principle, the address alludes to "the sacrifice of all moral rectitude by the persecutors of the Founder of our System, and the prostitution of justice to accomplish his downfall and that of many of his adherents." The people, it declares, "are as much ridden by the doctors as the degraded

peasant of Portugal is by his priest. They surrender their bodies to the doctors as implicitly as even the devoted religionist submitted his soul to his confessor." They have been excluded from all knowledge of medicine. "Neither is the cause of the doctors in opposing all innovation singular. It has always been so and always will be so. No body of men every voluntarily undertook a reform of themselves; they always have been, and always will be,—reformed. The people have but to demand, and it is done."

The address spoke hopefully of additions to their numbers by converts and men of influence and talent, and appealed to the practitioners in behalf of liberal culture and improvement. "If we are, as our enemies declare, ignorant, let us strive to become learned; if in any other way we are behind the times, let us strive to come up."

This sentiment was the key-note of the movement. The next meeting was appointed at Baltimore, in October of the ensuing year.

MORRIS MATTSON.

In the summer of 1837, Dr. Morris Mattson announced the contemplated publication of a treatise on the *Vegetable Materia Medica*. Directly afterward a proposal was made to him by Dr. Thomson to unite with it an edition of the *Guide to Health*. Dr. Mattson was averse to this proposition, but friends of Dr. Thomson urged him to make a contract for that purpose, pleading the necessity of a work on the Reformed Practice which would meet with the approbation of an intelligent community. He remained two years with Dr. Thomson and prepared the book. An altercation and angry controversy followed. Dr.

Thomson was unwilling that the book should be published, broke the contract and endeavored to procure possession of the manuscript. Failing in this, he threatened to thwart the whole plan. Dr Mattson then revised his manuscript and published the work under the title of *The American Vegetable Practice.* It was erudite, well written and adapted to the urgent wants of those who believed in Botanic Medicine.

He prefaced the volume with an address to the American public, setting forth his account of the misunderstanding between himself and Dr. Thomson. The veteran septuagenarian was praised and criticized. He was described as illiterate, coarse in his manner and extremely selfish ; that his great merit consisted in having made himself acquainted with remedies in popular use, and introducing them in a connected form. His actual discoveries were extremely limited. Lobelia was used in New England, particularly in Maine, as an emetic before Thomson was born, and the vapor bath was a familiar procedure of the American Indians. "I have ascertained," says Dr. Mattson, "that the medical practice of the Marshpee Indians, the remnant of whom are now to be found at Martha's Vineyard, in Massachusetts, is closely analogous to that of Dr. Thomson."

While refusing to defer his judgment or to acknowledge that Dr. Thomson had originated a perfect system of practice, Dr. Mattson gives him this generous testimony :

"There is no man in the country who has labored more effectually in the cause of Medical Reform than Dr. Thomson ; and notwithstanding his ignorance, he has been a prominent instrument in accomplishing a mighty revolution in the healing art. As a successful

medical reformer he is entitled to respect, whatever may be the frailties and imperfections of his character; and while I seek to unvail his errors, I shall ever accord to him the meed of praise for his useful discoveries."

He insisted, nevertheless, that the gigantic strides made in the way of medical reform, and the great perfection which it had attained, were chiefly due to the zeal and philanthropy of intelligent persons who had devoted themselves exclusively to the practice, making new discoveries of vegetable remedies, or who had entered the arena from a sense of duty alone to save their fellow-beings.

It is not wonderful that the endeavor thus made to place the new practice upon a basis of knowledge and intelligence, with a wide scope for further expansion and improvement, would soon command the field, and perhaps in a brief period cast the memory of the great Founder into the shade. Indeed, a decade of years did not pass, before every Botanic society in the United States has dropped the name of Thomson as a designation.

THE UNITED STATES THOMSONIAN SOCIETY.

The first annual meeting of the United States Thomsonian Society was also held in New York, on the twenty-second of October, 1840. The number in attendance was small. Only the State Society of Delaware signified its adhesion to the old ways. The evidences of disintegration were manifest.

Dr. Thomson presented an address setting forth the causes of the recent dissension as being "a disposition on the part of the mongrel Thomsonians to keep his system in their own hands, and thereby make it a

monopoly." He asserted that they were chiefly practitioners endeavoring to keep every body but themselves ignorant of the practice, and also, that they made use of medicines of a deleterious character,* and dealers in secret nostrums, thus bringing the Thomsonian system into disrepute.

The Convention adopted his sentiments, and issued an address in similar temper. The Thomsonian practice, it declared, had been introduced into every part of the United States, the Territories, the Canadas, West India Islands and Europe. The seceding members were described as "speculating upon the discoveries of Dr. Thomson, amalgamating his medicines with deleterious articles, and using their efforts to get the system into the hands of the practitioners, as is the case with the Medical Faculty."

It was another form of the old conflict of the world between the less cultured and the more intelligent. The division was never healed. Dr. Thomson had nearly run his career, and was not able to stem the current. He could only protest, and see his warnings little heeded.

LEGAL RESTRICTIONS ON MEDICINE REPEALED.

A sentiment favorable to the Reform treatment was active in Old-School circles. "We must adopt the Thomsonian medical agents, or lose our practice," said Dr. George McClellan, of the Pennsylvania Medical College, father of the late Union General. "I have used steam, cayenne and Lobelia," he added, "and found them useful to remove disease."

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* Meaning mandrake, Iris, wild indigo and bitter root.

With such testimony from the really learned members of the medical profession, medical proscription had a very frail platform to stand upon. It was little else than forensic trickery of third-grade lawyers, the greed of inferior physicians, and brute force.

The effort for the repeal of the laws in the several States proscribing Botanic practice and Botanic physicians, was pushed with increasing earnestness. The legislatures of the several States were flooded with petitions. The Reform physicians had taken the people into their confidence, and the people warmly responded.

The wars for religious liberty and freedom of conscience were never more fiercely and stubbornly contested. The leaders of the Reformers, John Thomson, Nicholas Smith, Moses Griffith, D. F. Nardain, found their exertions largely embarrassed by the compact organization of their adversaries, who were also more familiar than they with the applying of legislative machinery. They found it necessary to employ similar agencies. They could work to greater advantage if they had effective medical societies in the States and districts. They could thus bring the politicians into closer quarters, and cause the legislatures to respond.

One by one the Medical Black Laws were repealed or made innocuous. Rhode Island, Pennsylvania, Indiana, and a few other commonwealths, had never been disgraced by the exclusive legislation. Ohio had repealed her medical statutes as early as 1833, Maryland in 1838, and Vermont in 1839. Other States now did the same.

THE VICTORY IN MAINE.

Maine was also true to her position as the "Star in the East." She fell early into line, holding a State

Convention in 1837, at which a Botanic Medical Society was organized. A vigorous propagandism was also set in operation. A journal was established by Dr. Benjamin Colby, and lecturers employed to go through the State to address the people upon the subject of Reform Medicine. Everywhere they received a cordial welcome, which became enthusiasm. The members of the State Society also planned the establishing of an Infirmary, and with it a Medical College. Dr. Nicholas Smith attended the meeting of the legislature, and superintended the circulating and presenting of petitions. These were signed by upward of four thousand citizens. The endeavor was made to overwhelm them by sneers and calumny, and the usual finesse of legislation.

A champion was found in Mr. Smart of the Senate. He laid stress emphatically upon the fact, which has been true everywhere, that the medical statute had never been demanded by the people, but that when they expressed a wish it was invariably for repeal. He charged that it shielded and protected a favored class of men, while it debarred honest practitioners from reaping the benefits of their industry. It was opposed to the Constitution of the State; and he added the prediction, which has since been abundantly realized, that its abolishment would raise the standard of medical practice. The effort was successful, and the statute was repealed.

GEORGIA AND THE REFORMERS.

The conflict for medical freedom in Georgia was begun by Dr. Moses Griffith. Making his home at Augusta, in 1832, he reared the standard of Botanic Medicine, doing battle bravely till his death from

yellow fever in 1839. His success was commensurate with his efforts. At the instance of Dr. Lanier Bankston the Southern Botanico-Medical College was incorporated in December of that year, and the medical statutes were also repealed.

The legislature of Ohio, a few weeks before, had incorporated the Botanico-Medical College of Columbus, so that the two parent institutions began existence almost simultaneously. The Southern College began its career at Forsyth immediately, removing in 1846 to Macon. Its influence was widely extended over the whole South, and it enjoyed the favor of leading statesmen like Governor Brown, Alexander H. Stephens and others. During the Civil War its graduates were employed without reserve as Surgeons in the Confederate armies. Indeed medical partisanship did not rage so violently there as in the opposing ranks.

In 1841, sixteen states had removed the obnoxious medical laws from their statute-books. Of the remaining ten, only some four or five had ever enacted them, New York, Connecticut, Massachusetts and South Carolina remained last in the number.

HOW CONNECTICUT OBTAINED LIBERTY.

Connecticut had been the scene of a prolonged conflict for the equal rights of medical practitioners before the law of the state. Its Constitution prescribed explicitly that "no man, or set of men are entitled to exclusive public emoluments or privileges from the community." In the face of this solemn declaration, the exclusive right to practice medicine had been conferred by the legislature in 1792 upon members of the Connecticut Medical Society; and in

1810 another statute was enacted taking the right to recover debts for medical service from all persons except individuals licensed by a medical society or college of physicians. No such society or college, at that time, would license any body, however well qualified, who did not subscribe to their dogmas. Constitutional safeguards are often very flexible in the hands of courts and legislatures, seldom availing to inhibit any measure which it is desired to promote.

The Thomsonians of Connecticut were able, resolute and determined men. Led by the veteran B. W. Sperry, and men like Kelsey, Johnson and Lyman, they were certain not to flinch, or yield the conflict. They must take action as well as counsel together, understand fully their rights, as men and citizens, and resolve to persevere in their claims till these should be conceded. As *to unite* had been the motto of their Revolutionary ancestors, so to *organize* was felt to be necessary now. A Convention was held at Middletown in 1836, and organized a State Society. A memorial was prepared, signed by several thousand citizens, and presented to the General Assembly. It was disregarded by the Legislature; and the Society at its next annual meeting, voted to continue its policy, adding this significant resolution:

"That should our petition be again rejected and a *large number of our citizens continue to be branded as outlaws*, we will thenceforth demand at the ballot-box a restoration of those rights which have been denied to humble and respectable petitioners."

Dr. Isaac J. Sperry, of Hartford, was appointed a year later to conduct the case before the Legislature. He reported at the ensuing annual meeting that from fifteen to seventeen thousand had petitioned in 1838

for the abrogation of the proscriptive laws, and that the House of Representatives had reported a bill in their favor. Nobody had appeared before the Committee to oppose it, but there were thirteen physicians in the Legislature, who employed their influence successfully to procure its rejection.

Four years more passed with no better success. In 1840 it was resolved to change the policy for one more aggressive. Doctors I. J. Sperry, John W. Johnson and M. Gordon were appointed a Committee to apply in the name of the Society, for an act of incorporation. There was no better result and it was resolved to lay the matter before the people of the State. Four medical periodicals were established and widely circulated, several of them gratuitously. The sagacity of this policy was speedily proven. At the meeting of the Society in 1842, all was ripe for more direct action. The Democratic candidate for Governor, the Hon. Chauncey F. Cleveland, had always been willing to accord impartial justice to all parties. It was resolved to give him the support of the Reformers. He was elected and confirmed their expectations. The Society petitioned for an act of incorporation. This would give it power equal to that of the Connecticut Medical Society, in the matter of licensing physicians. The proposition filled the members of that body with dismay* and they were glad to be let off with the repeal of the obnoxious eighth section of the Medical law.

MEDICAL CONFLICT AND BIGOTRY IN NEW YORK.

The great struggle for medical freedom in New York was being characterized by uncertain results. The

*The Connecticut Botanico-Medical Society was finally incorporated in 1848, with full power to establish a medical college.

discussions which paralyzed the influence of the National Conventions of Botanic physicians and divided them into rival factions, had a detrimental influence here. The Governor in office at this time had always been unfriendly. A change, however, was taking place in medical and political sentiment. Resolution, courage, and conscious right were having their accomplishment. The House of Assembly of 1841, referred the petition for equal justice, to a Select Committee, of which the Hon. Erastus D Culver was chairman. Judge Culver was a man of advanced views and pronounced anti-slavery sentiments. He made an extended report declaring the provisions of the Revised Statutes in relation to the practice of medicine to be at war with the rights and privileges of individuals. The Committee could not disregard the prayer of thirty to forty thousand petitioners asking for even-handed justice. The legal enactments had fretted the public mind, and increased the advocates of the new system. Students believing in the superiority of the Thomsonian practice could not, though they passed the ordeal of examination, obtain diplomas from the colleges, nor licenses from the medical societies, and able physicians owning their belief in the superiority of the new practice were expelled from membership. The alternative was to sacrifice honest conviction, or stand proscribed by an act of legislature. Other states were repealing their medical laws, and several had never had them.

The Committee, therefore, chose to rest the matter on the broad ground of justice and absolute right to the petitioners, and as a measure of public policy.

A bill was accordingly introduced, which passed the House by a vote of forty-eight to thirty-nine. It was then favorably received by the Senate, but the rule forbade a bill to be read twice on the same day. Dr. Laurens Hull objected, and the next day the Legislature adjourned.

The political overturn of 1841 placed the Democratic party in the ascendency in the House of Assembly. The Committee on Rules attempted to dispense with the Standing Committee on Medical Societies. As the practice had always been to pack this Committee with physicians, who were thus enabled to have their own way almost arbitrarily, the purpose was evident to give all parties a fair opportunity. One man, however, was always the bitter foe of the Reform practitioners. This was Michael Hoffman, the leader of the radical wing of the Democratic party. At his instance the Committee was reinstated, and constituted in the usual way.

Another man, destined to become even more prominent in the councils of his party, was bold and manly in advocacy of equal rights and opportunity. The Hon. Horatio Seymour, a few days later, presented a petition, and moved its reference, together with others of similar purport, to a select Committee. In the debate which ensued, he remarked that it was a very serious question whether the Legislature should sanction the morality of what was a subject of complaint on the part of the petitioners,—the employing of a physician and then refusing to pay for his services.

The Hon. Charles Humphrey supported the motion, protesting against referring petitions to a Committee that from its organization was hostile to the object

sought. The Speaker, Hon. Levi S. Chatfield, was opposed to the proposition ; but the Assembly by a vote of eighty-one to twenty-seven, adopted the measure. This Committee set about its work promptly and introduced a bill, ten days later, authorizing Botanic physicians to collect remuneration for services.

The Chairman of the Medical Committee, Dr. William Taylor, had been president of the State Medical Society, and was in favor of the most arbitrary restrictive enactments. Having by the finesse of the Speaker got possession of several petitions, he procured delay till he should also make a report. This is a common artifice for defeating legislation. It was not till the last of March, an interval of two months, that the bill from the Select Committee was considered in Committee of the Whole. Hon. Sanford E. Church then moved a substitute repealing all restrictions, and providing that any person might practice medicine and receive compensation. This would extend the benefit to members of the Homœopathic School, which was then coming into favorable notice. The substitute was adopted, but created apprehension in regard to the possibility of its passage. Accordingly the whole matter was recommitted for amendment, and reported in a form confirming its provisions to Botanic practitioners, without the restriction to indigenous remedies. It then passed the Assembly. Before its reception in the Senate, the Hon. A. B. Dickinson and General Erastus Root moved to place it at once upon its final passage. It was, however, referred to the Medical Committee, and the Chairman, Dr. Sumner Ely, reported a new bill instead. It was another legislative subterfuge. It provided that no person should receive a license to

practice medicine till he had served as clerk to a physician for seven years; and no physician should receive the medical degree till he had been three years in practice or had spent six months in a hospital. That bill was laid upon the table.

This action was received with general indignation. Leading men proposed the organization of an Anti-Monopoly political party. The trend of public sentiment at that time was toward more direct participation of the people in the management of affairs. Examples were at hand to encourage the notion. Myron Holley and his friends had organized the Anti-Masonic party in 1828, with very encouraging results. Mr. Holley had again brought into existence the Liberty party in 1840, and immediately the legislature had passed laws abolisning negro slavery in New York, and freeing of the slaves brought into the State from elsewhere. It was believed that out of the hundred thousand and more who were unqualifiedly opposed to unjust discriminations between medical practitioners, ten to fifteen thousand would act together and hold the balance of political power.

The proposition met with much favor. Dr. Amos N. Burton, however, was bold in opposing. He was the associate of Dr. John Thomson, and had much of the active work to perform. He deprecated the notion of turning the Thomsonian cause into a political machine. He counselled the deserving of success before making any such attempt—"turning our attention to improving the qualifications of our practitioners by establishing a more thorough system of education, and inculcating a rigid system of honor, integrity and ability to practice in our profession; and THEN to use our united political influence in favor

of electing, *without respect to party*, such men to the legislature as know our rights and dare to maintain them."

He predicted confidently that the day was not far distant when their merits would generally be conceded by the people, and their wrongs redressed by the legislature.

This counsel prevailed, and the prediction was realized. The legislature of 1843 followed the example of its predecessors. The political exigencies, however, were favorable. The two parties were about equally divided through the country as well as in the State of New York. The action of Connecticut was suggestive. The several Reform parties perceived their opportunity, and joined in a strenuous appeal to the legislature of 1844. The New York *Tribune* gave them hearty support. Its illustrious founder, Horace Greeley, was always a zealous friend to their cause.

There were able men in that legislature. Many of them were afterward prominent in the State, and in National politics. Michael Hoffman had been again elected, but his influence was diminished. Among the others were Horatio Seymour, Thomas G. Alvord, Clark B. Cochrane, William F. Allen, Joseph S. Bosworth, Calvin T. Hulburd, General Auguste Davezac, Erastus Corning, Henry A. Foster, John B. Scott. It was a body of men sure to give prestige to their legislation.

THE MEDICAL PETITION.

The great Medical Petition was the feature of the session. Memorials from all parts of the State had been collected, and attached together as a single document. John Thomson placed it in a wheelbarrow

and in company with a party of friends, conveyed it up State-street to the Capitol. It was carried into the Assembly chamber, and there unrolled by Dr. E. J. Mattocks, in presence of the members. It has been described as thirty-one yards long, and closely signed. Enthusiastic individuals declared that it contained the names of a majority of the voters of the State. This may be an exaggeration, but there were enough to show that it would be no longer safe to trifle with their patience. New York was to decide who should be the next President. Mr. Carpenter, of the Assembly, and Judge Scott, of the Senate, warmly advocated the repeal of the obnoxious legislation. A bill for that purpose was reported, and opposed with the usual stock and stale babbling about ignorance and quackery. Judge Scott boldly hurled the charges back to those who made them. He challenged the evidence that the physicians of the Medical societies were men of superior education, and declared that "there are more quacks wearing the dignified title of Doctor of Medicine than are to be found anywhere else."

Opposition was in vain, and the bill became a law on the sixth of May, 1844. It repealed the act of 1830, the objectionable section in the Revised Statutes, and all laws of the State from prohibiting any person from recovering by suit or action due compensation for medical service rendered to the sick. It further exempted from liability to criminal prosecution or indictment for practicing physic or surgery without license, except for malpractice, gross ignorance or immoral conduct; and imposed severe penalties in these cases.

The passage of this act was announced by the New York *Tribune* in language of triumph. It was the

first medical law ever passed in strict obedience to the wishes of the people of the State of New York,—*and the last.* The physicians of the several schools of practice, Thomsonian, Reformed and Homœopathic, received the news with joyful exultation. The conflict was over, and they had wrested the prize of independence from the hands of obdurate and desperate men. The pæan of gratitude was repeated from one end of the Union to the other. Even South Carolina made ready to shake off the hoodoo incubus, and repealed her statute a year later.

The Thomsonian Medical Society of the State of New York, held its ninth annual meeting at Albany the ensuing June, and hastened to award the medal of honor to the men who had conducted the contest to its successful issue. The following resolution was adopted :

Resolved, That the thanks of this Society be and are hereby rendered to Doctors William B. Stanton, Oliver Cook and Amos N. Burton for their active exertions in procuring the repeal of an Unjust Law, the intent of which was to create an odious monopoly and to cut off a portion of the people of the State from their Constitutional and unalienable rights."

REJOICING IN OHIO.

The Reformed Medical School at Worthington had been closed in 1842, and Dr. Morrow and his associates had transferred their operations to Cincinnati. He visited the former place in the spring of 1845, to take part in a presentation to Colonel James Kilbourne, at the College building. He delivered an address upon the occasion, recapitulating the early history of the enterprise and the achievements of the physicians of

Reformed Practice. Referring to the time when he began his labors at Worthington and the restrictive medical laws then in force, he said :

"How changed the scene! Since then, by the aid and influence of the friends of this benevolent enterprise [the Worthington College] and the assistance of others having kindred objects in view, the illiberal and intolerant spirit of Medical monopoly has been most signally rebuked on every side.

"State after State has marched forward to the noble work, and blotted out, *it is hoped forever*, from the statute-books all laws granting exclusive privileges to one class of medical practitioners to oppress another ; thus placing each before the community on its own proper basis."

A dark chapter in American history, both medical and legislative, was thus brought to an end. The Medical Inquisition was closed ; the occupation of the informer and persecutor was gone. It was truly like the scene of the pouring out of the Vial of the Fifth Angel upon the seat of the Apocalyptic Beast. But over the whole country the result was most salutary. Skill in healing became more esteemed than a mere factitious medical orthodoxy. Liberty, once established through the land, produced its legitimate fruits. Medical knowledge became more thorough, medical skill more expert. The educational requirements of the medical colleges were steadily elevated to an altitude which they had never before attained. The ratio of mortality was actually lessened, and epidemics became less deadly. The medical world was, for the time, in that part of its orbit nearest the sun, and the dismal winter was made glorious summer.

CHAPTER XI.

MEDICAL COLLEGES AND ORGANIZATIONS.

The leaders in the several movements for the reform of Medical Practice were awake to the importance of technical instruction in the Art of Healing. The action of Dr. Beach and Dr. Isaac S. Smith in this matter has already been noticed. They believed implicitly in native genius for the work, but they insisted none the less for adequate knowledge of scientific details and procedures. Few individuals went from their schools ill-qualified for their vocation.

It has been sometimes affirmed that the medical institutions of the dominant school, already established, are ample for the purpose, and give a higher quality of technical instruction. Yet it is notorious that they have been exclusive in their ethics, not only refusing to teach any thing outside their own prescribed partisan curriculum, but withholding from the student ready to graduate his justly-earned degree, except he would swear to practice medicine as he had been taught. No Roman seminary was ever more arbitrary, exclusive, or exacting of a pledge of absolute and perpetual orthodoxy, and one requirement was an evident copy of the other.

Besides this, observation has failed to show the superiority in quality of instruction, of which boast has been made. It has been principally a bandying of opprobrious epithets belonging in the category with those of the fish-market, and little else. A large majority of the physicians called scientific by the

authorized parlance were actually defective in primary instruction, and unable to write, pronounce, or even to spell technical words correctly. The very Latin in which they wrote prescriptions was a bidding of defiance to etymology and syntax. As late as 1884, the Commissioner of Education, at Washington, added his testimony that in most of the medical colleges, "no examination for entrance, nor any evidence of the possession of a respectable disciplinary education is called for." * He added the sweeping assertion that, "those who control such professional schools, by their practice, advertise to the world that neither Law, Medicine nor General Science demands any more training than the common handicrafts, or farming."

From men and institutions, of which this is true, the vile and depreciating imputations which they place on those of different sentiment, come with very ill grace. It is rather the tirade of the politician of the slums than the speech of scholarly men—the abuse of the partisan, and not the candid criticism of the lover of learning and science.

WORTHINGTON MEDICAL COLLEGE.

The "Reformed Medical Academy" had got fairly into successful operation when Dr. Beach and his associates began to conceive ambitious schemes of an extensive propagandism. Circulars were sent to different individuals living in the Western and Southern States. A reply from a prominent citizen of the State of Ohio served to turn effort in that direction.

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* The United States Medical College of New York, from the first, made such examinations an express condition for entrance.

Worthington had been laid out by Colonel James Kilbourn, of the Scioto Land Company, in the year 1803, and speedily became a thrifty town. Its leading inhabitants were ambitious that it should become the capital of the State. Failing in this, they had accepted the proposition of the Rev. Dr. Philander Chase, and established a college. An acrimonious controversy in the Protestant Episcopal Church of Ohio, respecting the administration of Kenyon College, had led him to resign the presidency and direct his energies to the founding of a new educational institution. For a time the enterprise prospered, till the unhappy breach was reconciled, and Dr. Chase was elected Bishop of Illinois. About this time the circular of Dr. Beach was received with glad welcome, and the rooms of the college were placed at his service. An act of the General Assembly, in 1829, conferred the necessary legal authority.

A meeting of the Reformed Medical Society of the United States was held on the third day of May, in that year, and a resolution adopted declaring it "expedient to establish an additional medical school in some town on the Ohio river, or some of its navigable tributaries, in order that the people of the West may avail themselves of the advantages resulting from a scientific knowledge of Botanic Medicine." *

Dr. Thomas Vaughan Morrow was selected to be the principal of the new institution. He was a native of Kentucky, well educated, enthusiastic and persevering, in the flower of his age, and liberally endowed

* At that time the *Reformed* School was termed "Botanic." There were but twenty-four States in the American Union, and all except Missouri and Louisiana were east of the Mississippi river. The "West" comprised all the country beyond New York and Pennsylvania. As there were no railroads, navigable waters had an importance not easy to imagine.

with energy and those qualities of heart and mind that characterize the true leader. Dr. Ichabod G. Jones, his fellow-laborer, aided him in the undertaking.

Before the Legislature would permit the College at Worthington to be opened with the medical department, Dr. Morrow was required to submit to an examination by a leading medical teacher of Philadelphia in regard to his proficiency and fitness. He passed the ordeal successfully.

The new institution had two regular terms in each year, covering a period of ten months. Every student was required to possess a good English education, but his medical attainment and not any particular length of attendance, was made the condition for graduating. The standard, nevertheless, was higher than that of the great majority of medical colleges in the United States. When we remember that even the school that John Hunter established was purely a private enterprise and had only a term of six weeks, we can the better appreciate the state of affairs at Worthington. Whatever deficiency existed was general, and by no means confined to institutions that were not of the prescribed orthodox party.

The medical department at Worthington was conducted with signal ability. It speedily became the object of attacks, characterized by diabolic malignity, as though to engulf it in the poisonous current of spite and calumny. The institution, nevertheless, weathered the storm, and its graduates became popular as physicians.

In 1836, the Faculty began the publication of the *Western Medical Reformer*. In this they declared themselves to be *Botanic* physicians, but a distinct school

entirely from the disciples of Samuel Thomson. They positively affirmed that "the honor of attempting to introduce a Scientific Botanical System of Medicine and Surgical Practice seemed to be reserved for the celebrated Doctor Wooster Beach, of New York." It was originated, they added, without the least reference to other Reform Systems, "and for the most part, without even the knowledge that such a system as the Thomsonian, or such a being as Samuel Thomson was in existence." They even repudiated the Thomsonian system as having the tendency and aim of a total subversion of all science, and a substitution of a limited method, founded on the dogmas of a single individual.

These utterances, bitter as they were, had been anticipated, and were followed by others from the Thomsonians, even more harsh and vituperative. It seems to be a law in human nature, that bodies of men that agree most closely in sentiment, are most severe and vindictive over points of difference. The broadening of professional knowledge, and the necessity which come to act together against their common persecutors, tend afterward to assuage much of this animosity. Dr. Morrow himself, in later years, sought a union and coöperation with those whom he had so warmly opposed.

The medical college at Worthington was compelled to depend for support upon its receipts for tuition, and contributions from its friends. With the spring of 1837, there came a period of crushing financial disaster, which for years arrested the business and industries of the country. The instructors at the College were compelled to close their infirmary, and to suspend the publication of their journal. Personal

superadded to professional enmity, was also encountered. A professor, who had been superseded, became the most rancorous and unscrupulous of adversaries. Persecution was renewed in different form. Dr. Morrow was himself prosecuted, but without success. Both he and the institution were popular at Worthington. Attack came next from distant places. Exaggerated stories were told of disinterments of the dead for dissection, till the less intelligent of the population were excited into fury. It was the period of mob law in America, and physicians in that region were not unwilling to employ that agency. In the spring of 1840, a body of several hundred lawless individuals was conducted to Worthington, and turned loose upon the town, to sack the College, rifle buildings and perhaps to murder. The professors and students, however, made good their escape, but the college building was pillaged, and the town placed at the mercy of the drunken rabble.

Dr. Morrow and his assistants remained bravely at their posts after this occurrence, but foresaw that their enterprise must be transferred to a larger field. The college, however, was maintained two years longer, before a final abandonment.

BOTANIC MEDICAL COLLEGES.

By no means did the professional disciples of Samuel Thomson continue indifferent in the matter of preliminary and more thorough instruction in Medicine. Even the Conventions held annually under his immediate direction, had a powerful influence to awaken their consciousness of its necessity. To be sure there were many, chiefly holders of the patent, who were, like their veteran leader, sticklers for the contrary

notion. It was felt in all quarters that the lack of technical knowledge, as well as of literary accomplishments, was certain to lower Botanic practitioners in general estimation, and eventually to wreck the school. It was acknowledged and believed that natural gift or intuitive faculty was essential to the genuine physician, but even then liberal culture and professional instruction would make him more useful and acceptable. Hence, in the states where there were Botanic Societies or any considerable number of Botanic physicians, the project of a medical college became a theme of anxious consideration.

Dr. Benjamin Colby, of the *Thomsonian Recorder*, called attention to the fact that the Thomsonians were debarred from admission into the Medical College of Maine, and likewise, that the ordinary physicians would not even attend patients who had been in the habit of employing Botanic practitioners. "The importance of Thomsonians having a general knowledge of anatomy, physiology, pathology, surgery and midwifery," he declared "to be deeply felt by every one who enters the practice; he cannot obtain the confidence of the community without this knowledge."

At his instance, the Thomsonian Medical Society of the State of Maine, at its meeting in 1839, appointed a committee to consider the subject. A plan was reported the next year and accepted.

Dr. John Thomson and his brothers were actually at odds for years with their father upon this subject of medical education. There was likewise a general feeling that the literature of the Botanic School was meagre and insufficient. When it was learned in 1837, that Dr. Morris Mattson contemplated the pre-

paring of a work on the *Vegetable Materia Medica*, there was general gratification expressed. The hope was entertained that he would unite it with Thomson's *Guide to Health*, and thereby disguise and eventually remove the deficiencies palpable in that work.* The arrangement, however, failed. Dr. John Thomson himself published a work, in 1841, purporting to be a revised edition of the *Thomsonian Materia Medica*, crediting it to his father, except in certain features from which the latter dissented, and dedicating it to their faithful friend and defender, Professor Benjamin Waterhouse, of the Harvard Medical School. It was a very complete work for the time, including a treatise on Anatomy, and a very thorough exposition of Medical Botany and Botanic Pharmacy. King Louis-Philippe, of France, and several other European rulers, presented him with medals in honor of the publication.

The same year, the Thomsonian Medical Society of New York, of which he was president, appointed a committee to consider the expediency of establishing a college in that State, and the propriety of petitioning the legislature to incorporate such an institution, and also of inviting the Botanic physicians of New Jersey and Pennsylvania to coöperate in the enterprise.

Dr. Samuel Thomson himself was present at this meeting, but made no opposition. He was in declining health, and was made the recipient, on this occasion, of many personal honors and attentions.

A Convention was also called in New England to confer upon the proposition to establish a medical

* Dr. Mattson says: "His [Thomson's] friends urged me to remain [in Boston] and enter into a contract with him, if possible; representing to me the necessity of having a work on the Reformed or Vegetable Practice, which would meet the approbation of an intelligent community."

institution in the Eastern States. It failed to assemble at the time appointed, but at the suggestion of the Thomsonian Medical Society of Connecticut, a meeting was held at Boston in the autumn of that year. This Convention proposed a very definite course of procedure, the founding of a college and the establishing of a curriculum of medical study.

This excited alarm in the orthodox medical circles, and Dr. J. V. C. Smith, then editor of the Boston *Medical and Surgical Journal*, thus belabored the projectors:

"They voted that the lectures embrace the following branches of medical study, viz.: Thomsonian Theory and Practice of Medicine, Anatomy, Surgery, Physiology, Obstetrics and Chemistry. *Query:* How long will it be before the Thomsonian Theory and Practice of Medicine be lost sight of, and the new school be a rational one, conducted on scientific principles and under the control of a respectable learned Faculty?"

In addition to this scoff, Dr. Smith mentioned the nomination of Dr. William Taylor as a candidate for member of the House of Assembly of New York. He desired physicians to support Dr. Taylor, without regard to party, in the hope that "he will keep at bay the petitioners of the Thomsonians, who claim equal standing with the learned profession in the State by legislative enactment." *

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* The tortuous action of Dr. Taylor, which the noble and manly course of the Hon. Horatio Seymour largely circumvented, the favorable legislation in the Assembly of 1842, and its defeat in the Senate by an artful parliamentary obstruction, have been already described. Dr. Smith himself lived to see the proscriptive medical laws repealed, to be himself disfellowshiped for having become more generous and liberal, and even to be a lecturer in a Woman's Homœopathic Medical College.

Dr. Morris Mattson ungenerously added his criticisms to those of the other adversaries. The Boston *True Thomsonian*, which had been established by his supporters in opposition to Dr. Thomson, actually went so far as to advise young men who were desirous of obtaining a thorough medical education, and qualifying themselves for medical practitioners, to enter the "regular" schools at once. It even declared that students graduating from such schools would be more acceptable to New Englanders generally than they would be if educated in Thomsonian schools or colleges.

If this advice was sincere, it was short-sighted and impracticable. Only young men of extraordinary mental and moral stamina would graduate at an institution enjoying political favor and social distinction, and then deliberately undertake for conscience' sake to walk in the rugged path of the reformer. There was, however, another obstacle even harder to surmount. Students of Reform proclivities would not, on any account, be permitted to graduate at such a school.

Several attempts, however, were made to establish private courses of lectures. Dr. Mattson himself announced his purpose to open a medical school in Boston. Dr. Colby also, having suspended the publication of the *Thomsonian Recorder*, and removed to Nashua, in New Hampshire, delivered a course of lectures at his new home. Several of the Thomsonian medical societies also employed lecturers. But there were no permanent results.

In the State of New York there was little better success. While the conflict for medical enfranchisement was in progress, the energies of the Reform

physicians were expended in the struggle. The proscriptive statutes having been annulled in 1844, the Thomsonian Medical Society, meeting in June, took steps preliminary to the founding of a medical college. A Board of Trustees was appointed,* and an invitation extended to the friends of Medical Reform in New England and elsewhere, as well as at home, to take an active part in the enterprise.

"There have been, and now are, many whom colleges did not make," pleaded the veteran Dr. Lapham; "yet such are the men who make colleges, and none more highly appreciate the facilities which such institutions are capable of affording to the student than those who have thus reached the pinnacle of fame alone and unaided."

Several meetings of the Board were held, money was subscribed, and a site proposed at Saratoga Springs, but with no satisfactory result. The leaders, Samuel Thomson, his sons John and Jesse Thomson, Abiel Gardner, were dead, and others superannuated. The pressure of the former conflicts was removed, and a feeling of security followed, which led to the general waning of enthusiasm for aggressive activity.

THE BOTANICO-MEDICAL INSTITUTE OF OHIO.

Meanwhile, the endeavors in the South and West to establish colleges for instruction in Botanic medicine, had better results. Dr. Alva Curtis, while living in New Hampshire, had witnessed in his own family the life of a brother made miserable and cut short by mercurial treatment. He quickly discarded the whole

* This Board consisted of Doctors Thomas Lapham, William B. Stanton, E. J. Mattocks, Ebenezer Ford, M. W. Hill, I. K. Averill, and Cyrus Thomson.

practice and embraced the Botanic. It was the period of compulsory statutes, when the whole country was falling into the slavery of class-legislation. Curtis, fond of controversy, entered the field with tongue and pen, and his address at the first National Convention of Thomsonians in Baltimore, aroused wide attention. The proprietors of the *Thomsonian Recorder* at Columbus, the capital of Ohio, invited him to become the editor. He was not content, however, to beat his oppressors in controversy. He resolved to establish a medical college which would make the work permanent.

He began in 1835 to instruct medical students at his own house, and followed this effort by an application to the General Assembly for an act of incorporation. His adversaries opposed him by artifice and calumny, but they found him able to meet them at every point, to rebut every objection, and certain to win friends and supporters in every conflict. At one session the House of Representatives passed the measure, and at the next, the Senate enacted it with few negative votes, thus making it a law.* The "Literary and Botanico-Medical Institute, of Ohio," was incorporated on the ninth day of March, 1839, with the powers of a university. Its medical department was opened at Columbus the ensuing autumn, under the imposing title of "The College of Physicians and Surgeons," and has thus the distinction of being the Parent School of Botanic Medicine.

Such a departure from his ways and methods, Dr. Samuel Thomson had deprecated, as being a virtual apostasy and a reverting back toward the Old School.

*In Ohio, a bill passing both Houses of Legislature is thereby enacted; the governor having no veto power.

Dr. Curtis, however, had broken with him and formed a new National Convention of "Independent Thomsonians,"* of which he was the first president.

Dr. Curtis was as tenacious as Dr. Thomson of being the chief authority and umpire, and often lectured his associates magisterially for what he considered their derelictions. He was strenuously opposed, almost to open hostility, to the establishing of other colleges of the same medical faith. He had, perhaps, the discretion not to arouse their direct enmity, by publicly attacking them; but he took pains, from time to time, to declare that there were too many such institutions. He actually proposed in 1846, that they should all sell their property and merge into the institution of which he was the Chancellor.

The history of the Botanico-Medical College of Ohio, was, as might be expected from such a disposition, somewhat checkered. The institution was removed in 1841, by legislative permission, from Columbus to Cincinnati. A year later, an article in the Boston *True Thomsonian*, announced the opening of the "American Medical Institute," giving no locality, but naming as the faculty, Doctors Alva Curtis, Joseph Rodes Buchanan, Harvey W. Hill and Samuel Curtis. In 1851, the charter was again amended. The Scientific and Literary department was erected into a distinct corporation, of which Dr. Curtis was in sole charge, and the medical department became the Physiopathic College of Ohio. The Faculty of the latter institution consisted of Doctor Joseph Brown,

*This name was speedily laid aside for that of "Physo-Medical," or "Physio-Medical." The Eastern Botanic physicians for a time called themselves "Physopathists," but later the title of "Reform Physicians" was for a time adopted. Most of them finally united with the Eclectic School, and those who remain are known, as they have been for forty years, by the designation of "Physio-Medical."

the dean, Doctor E. M. Parritt, late of the Worcester Medical Institution, Doctors E. H. Stockwell, J. A. Powers and R. C. Carter.

In 1859, the Physio-Medical Institute was organized. Dr. William H. Cook, formerly of the Syracuse and Metropolitan Medical Colleges, in New York, was at the head, Dean of the Faculty, editor of the *Physio-Medical Recorder*, and author of several medical works of merit. Dr. Curtis, after various adventures, attempting to establish a medical school at Boston to cripple the College at Worcester, and again in Connecticut, and holding a chair in the Metropolitan Medical College, finally returned to Cincinnati and accepted a professorship in the Physio-Medical Institute. This College was finally suspended in 1885.

THE SOUTHERN BOTANICO-MEDICAL COLLEGE.

The history of the Southern Botanico-Medical College, of Georgia, is in many respects a counterpart of the sister institution in Ohio. Its founder, Dr. Lanier Bankston, bore a very similar relation to Reform Medicine in Georgia and the South, to that sustained by Alva Curtis in Ohio and the Northwest. He was amply qualified for the work, scholarly and eloquent, tenacious of his authority, fluent with speech and the pen and possessing the endowments of a high-toned gentleman. He began practice as a Botanic physician in 1832, and quickly became awake to the importance of a suitable institution for the instruction of medical students in the Reform principles. He devoted his life and energies to this end, laboring diligently, expending freely his private fortune, and yielding up other projects and ambitions.

In order to fit himself more completely for a teacher, he began at the lower steps and attended lectures at the medical college in Augusta. He next obtained the coöperation of others of like convictions. It was his desire to establish the proposed institution at Macon, then the capital of the State, but in this he was overruled. The College was opened at Forsyth, on the first day of December, 1839, with but two students, and on the eighteenth, Governor McDonald signed the bill creating it a legal corporation.

The new institution began with encouraging prospects, and encountered its full share of dissensions and reverses. Reformers, with all their great merits, are not always the most amiable of humankind, or the most richly endowed with charity. A division arose in 1840, which resulted in the expulsion of Dr. William H. Fonerden from the Faculty.* In 1841, Dr. Bankston was elected Dean in place of Dr. Hugh Quin.

In 1841, a Convention of Botanic physicians of Georgia and Alabama assembled at Columbus, in the former State, and organized the "Southern Botanico-Medical Society." Its objects were specified to be, the promotion of harmony and the furthering of the interests of the Southern Botanico-Medical College.

The next year the legislature made a grant of five thousand dollars to the institution. This generous

*He was charged with keeping up a constant disturbance with the students, threatening that they should not graduate except they received private instruction from him, and with abusive language of the other professors. Dr. Alfred N. Worthy was elected in his place to the chair of the Theory and Practice of Medicine, and Dr. Henry Lee, of Middletown, in Connecticut, as professor of Anatomy and Surgery. The Trustees also established as their official organ, the *Southern Botanico-Medical Journal*, making Dr. Lee its editor, in place of the *Southern Medical Recorder*, which Dr. Fonerden had conducted. This last arrangement seems not to have been of long duration.

action was repeated some years afterward. The difficulties with Dr. Fonerden were amicably adjusted.

In 1845, the college was removed to Macon. This action was attended by a division of the Faculty, Dr. Quin and others resigning. The building was destroyed by fire, but by help from the legislature, and the liberality of private individuals, was soon replaced by a new structure. There was a disposition among the Botanic societies to a frequent change of name; and finally, the simple designation of "Reform" became very general. Accordingly in 1854, the college at Macon took the name of the "Reform Medical College of Georgia." It was now a favorite institution among the leading men. The graduates were generally popular and successful as physicians, and the most prominent public men of the State of Georgia were their patrons.* During the Civil War, physicians of the Botanic and Eclectic schools were readily accepted as surgeons in the Confederate Army, and to their credit, as well as to the lasting honor of the authorities employing them, they justified their appointment by their professional skill and efficiency.

The college, like all the other institutions of learning in the Southern States, was compelled during that period to close its doors. It was revived again in 1867, under different conditions. The Botanic physicians had generally dropped their former animosity toward the Eclectic school, and even become partial to its remedial procedures. When the college was opened again, at Macon, it took the name of "The College of American Medicine and Surgery." It, however, maintained only a precarious existence till

* Hon. Alexander H. Stephens, Governor Joseph Brown, Gen. Robert H. Toombs, and others of that class, were patrons of the Reform practice.

1881, when it was removed to Atlanta, now the capital of Georgia. Here a new Board took it in charge. A few years later it was united with the Georgia Eclectic Medical College, now "The Georgia College of Eclectic Medicine and Surgery;" and the present arrangement assures greater success and prosperity than were enjoyed before.

Dr. Bankston, the veteran Medical Reformer of Georgia, accepted the invitation, several years ago, to visit the college, at Atlanta, and lecture to the students; forcibly illustrating the fact that in his case, as well as in others, the partisan jealousy and animosity which had impelled him to reject disdainfully the overture of Dr. Morrow for union of Botanic physicians for the common good, had become now only a thing of the past.

THE BOTANICO-MEDICAL COLLEGE OF MEMPHIS.

The Botanico-Medical College of Memphis, the third in this category, had an analogous origin. Dr. Michael Gabbert, a physician at Somerville, in Tennessee, had early observed the terrible effects of the agents employed as remedies, in shattering the health and blighting the lives of patients. So thoroughly was he convinced that the practice of medicine was a curse, rather than otherwise, to the human race, that he determined to abandon it, and even to leave his own family, in the case of sickness, to get on as well as possible without medication. He adopted the profession of law, and became a skillful attorney and counsellor. At this period his attention was directed to the Botanic practice. Two physicians, both of them his personal friends, had given up a patient to die with pneumonia; after which an unlettered

Thomsonian took the case and restored him to health. Dr. Gabbert began at once an extended investigation of the new practice, and witnessed results that seemed miraculous. He resumed his former profession, but as a Botanic physician, and soon became widely celebrated. His method was to inspire confidence in the patient, and to employ his remedies as auxiliary.

He was deeply impressed with the necessity of more thorough as well as more accurate medical instruction. Having removed to Memphis, and gained a wide popularity as a physician, he resolved to establish a medical college in that city. He was aided in the project by Dr. James Seaver, who was, like himself, a convert from the Old School. The bill to incorporate the proposed institution was introduced into the General Assembly early in the winter of 1846, and became a law on the second of February. The Trustees were taken from the most prominent citizens, and were in hearty accord with the founders.*

The new college began its career under the most encouraging auspices. It had a Faculty of unusual ability,† and the classes were large. Following the example of other Reform medical colleges, an official organ, the *Southwestern Medical Reformer*, was established, with the late Dr. William Byrd Powell for editor. It was the custom, perhaps more honored in the breach than in the observance, to describe the prospects of these institutions in language more glow-

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* Governor Frederick P. Stanton and the Rev. Samuel Watson, editor of the *Northwestern Christian Advocate*, and a leading divine of the Methodist Episcopal Church, were of the number.

† Besides Doctors Gabbert and Seaver, the Faculty included Dr. G. W. Morrow, afterward a professor at Worcester and Syracuse; Dr. Hugh Quin, of the Southern Botanico-Medical College and Alabama Medical Institute.

ing than the facts would always warrant. Accordingly, we find in the first numbers of this periodical the extraordinary statement that the Botanico-Medical Colleges of Wetumpka, in Alabama, and Forsyth, in Georgia, had been united with the new college at Memphis. The truth was that the institution in Georgia had been removed from Forsyth to Macon, and that several of the professors, not pleased with the condition of affairs, had accepted chairs in the "Alabama Medical Institute," which had been established in the autumn of 1845. This enterprise had been given up, and Dr. Hugh Quin and one or two others had become members of the Faculty at Memphis.

This college deserved and enjoyed its full share of public favor and prosperity. It had able instructors, and was well conducted. The graduates were generally worthy men and successful practitioners.

There were other Botanico-Medical Colleges established in different parts of the country by enthusiastic and sanguine individuals, but after a brief career, they passed out of existence. They did not perish, however, from want of merit or because of defective facilities for proper instruction. The trouble lay in the lack of pecuniary means. The institutions of the dominant schools had often liberal appropriations from the treasury of the State where they were located, but with the exception of the College in Georgia, they had no resources beyond the fees for instruction, and contributions from friends. Meanwhile, they were in the face of an opposition, upheld by social and political favor, and though often hopeful beyond bounds, they were finally compelled to succumb.

EARLY ECLECTIC ORGANIZATIONS.

When the American Colonies had secured their independence and footing as Commonwealths, they were cast upon an ocean of new peril. There were jealousies and even collisions between them, conflicts of interest between state and state, and ill feeling generally. Massachusetts was at loggerheads with Rhode Island, New York almost in open conflict with New Hampshire over the possession of Vermont, and Pennsylvanians had actually expelled hundreds of colonists from Connecticut out of their homes in the valley of Wyoming. Other states were in like turmoils. The alliance which bound them together seemed to be little stronger than a rope of sand. It neither secured respect abroad, nor peace and order at home. The southernmost states were beginning to consider the policy of commercial arrangements with Great Britain, in preference to friendly relations with the trading communities of New England. The colonists of the Ohio and Mississippi valleys actually threatened to place themselves under British protection. In the seaboard towns of Massachusetts, was talk of a separate Eastern Confederation. Abroad, everything looked unhopeful and gloomy. American citizens were made slaves in the Barbary states, and had no government able to help or even to ransom them. The British Ministry bullied us and refused to execute the treaty of 1783; France and Spain insulted us, and Holland, always our sincere friend, distrusted us. Anarchy, if it did not exist already, certainly threatened us; dissolution and worse conditions, perhaps a general return to British allegiance, were all that the future appeared to have in store.

Even a Terentius Varro, who in the face of overwhelming defeat, despaired not of the Roman Republic, might have deemed ours a more hopeless matter.

Certainly there was no help for the new Commonwealths, no statesman or government beyond the Atlantic to come to them in this hour of need. Their own hand alone must bring them safety, their own energy and patriotism afford the necessary deliverance.

It is always a few who do the real work for the many. One man rose the emergency and a choice company took part with him. Washington foresaw that in order to establish a more perfect union, the East and the West must be bound together by a common interest. He began the endeavor by the project of a canal from the Ohio river to the Potomac, which Maryland and Virginia should construct. Then it was proposed, as though suggestively, that Delaware and Pennsylvania should likewise participate in the enterprise; and finally, at the instance of James Madison and John Tyler, all the states were invited to counsel upon the subject. The invitation was adroitly worded to include other matters of general interest. In this way came the Convention of 1787, and the Federal Union.

The various Schools and groups of Medical Reformers, during the third decade of the nineteenth century, were in analogous conditions of disorganization, mutual jealousy, and in several instances, of open hostility. Their respective medical journals were actually at many times more unfriendly toward members of the other parties than even the common adversary, that was actively and persistently seeking to crush and annihilate them all.

A few awoke to this lamentable condition of affairs, and set themselves at work for its removal. The first effort was begun by several Botanic physicians of Philadelphia and its vicinity. There was formed there about the year 1833, or a little before, an organization by the name of the "Pennsylvania Associate Medical Society of Botanic Physicians." The leading man in the movement was Dr. John B. Howell. He was a native of England, and had pursued the study of medicine with Dr. Thornton, of London. He came to America in 1793, and engaged at once in the pursuit of his profession. He was zealous in the promulgation of his peculiar sentiments, and did not rest till he had established a society to uphold them. In his address as president, in 1836, he then made the enumeration of the true leaders of the movement.

"Another individual arose who was eminently fitted to advance the cause. Possessing by nature an original cast of mind, searching and inquisitive, fond of the solitude of the forest, his favorite pursuit was in searching among the roots and flowers of the field and forest for remedies to arrest disease and ameliorate the condition of the human race. This was NICHOLAS CULPEPER. With him may be classed the well known Parkins, author of a work of great merit, though too little known, *The Holy Temple of Wisdom.* Also, Rafinesque, Richard Hill, James Morrison, Samuel Thomson, Horton Howard, and others in our own country particularly calculated for such pursuits."

Dr. Thomas Cooke had been a student of Dr. Howell, and had been thoroughly indoctrinated by him in the conviction, that for the promotion of the cause of Reform in medicine, union among its supporters is absolutely necessary; because, besides popular prejudice, there was also the combined opposition to be

encountered of a privileged medical aristocracy. Dr. Howell died in 1839, leaving this sentiment as an heir-loom to those who were to succeed him. Doctor Cooke immediately took up the work. Associated with him was a group of practitioners, several of whom had been affiliated with the different schools, but had become convinced that good sense and a true loyal regard for the best interests of Reform in medicine imperatively required the laying aside of personal rivalship and animosity, for the purpose of friendly professional relations. They began tentatively by the establishing of a semi-monthly periodical at Philadelphia, *The Botanic Medical Reformer and Home Physician.* Dr. Cooke was the editor, and explained its purpose to be the uniting of the Botanic physicians. He added that they would then be unconquerable. "We shall do all in our power," said he, "to cement the bonds of affection between the Botanic brotherhood, who have so long been estranged."

As though he had taken the mantle of Dr. Howell, his preceptor, he thus began by reiterating his sentiments. In his first number he enumerated as "Benefactors of Mankind," Nicholas Culpeper, who lived in the Seventeenth Century, and published a series of works which set forth a very complete Botanic Practice; Samuel Thomson, who had caused a revolution in medicine; Elisha Smith, Horton Howard, and Wooster Beach, whom he distinguished as "the first man that attempted by means of Reform medical schools to elevate the standard of physicians." Doctors Thomas Hersey, T. V. Morrow, Alva Curtis and John J. Steele were also included.

The publishers of the *Reformer* further declared

that they were not the partisans of any school or particular set of men, neither for the ancients nor the moderns, but of every age and nation. They were not desirous to be particularly eminent in regard to theoretical medicine, but aimed rather at the pursuit of medicine practically. Hence it was that they desired better instruction for practitioners, and praised Dr. Beach as having advanced beyond Dr. Thomson. "We highly appreciate the labors of Dr. Samuel Thomson," said the veteran Thomas Hersey, "and contend that much remains to be done, beyond all that he has ever known; the Healing Art is yet in its cradle, and must not be strangled there."

THE NAME "ECLECTIC" CHOSEN.

The next step was the adopting of a new name. One journal had denominated the *Reformer* a Thomsonian magazine, while the *Southern Botanic Reformer* declared that its purpose was "to support the American Practice of Dr. Wooster Beach, and the doctrine of the Reformed College at Worthington."

Dr. Cooke replied that he had never professed to be a Thomsonian, or supported any one system of practice exclusively. "We have expressly stated," he added, "that WE WERE ECLECTICS It is true that we have always expressed ourselves in favor of Dr. Beach and his American Practice, as also the Worthington College." He then followed this avowal with a significant retort:

"We have also always expressed favorable sentiments in regard to the establishment of Reformed Botanic Schools and Colleges; but we cannot see wherein the Thomsonian system requires a College to

elucidate more particularly the ideas of Dr. Thomson on Medicine. The Book has its all. Go beyond that, and Dr. Thomson himself says: 'He knoweth it not!'"

This is the first instance in which the term *Eclectic* had been employed as a distinguishing appellation by any one of the groups of Medical Reformers. It seems, however, to have always been an attractive designation. We often observe the apparent annoyance of physicians of the orthodox school, and their eager protest that they also were Eclectic. The term was first used to distinguish a school of practitioners in the reign of the Roman Emperor Vespasian, eighteen centuries ago. It was then applied to a branch of the Pneumatists, who were distinguished for their philosophic character and superior professional acumen.*

There also appeared a group in Germany in the Sixteenth Century that endeavored to establish a system derived from the Dogmatic teachings of the School of Hippokrates, the psychic doctrines of Paracelsus, and other notions then extant. Professor Waterhouse applied the designation to Dr. Thomson himself, and a little while afterward Dr. Isaac J. Sperry, of Connecticut, and a writer in the *Western Medical Reformer*, simultaneously gave it to Dr. Beach. Its adoption by Dr. Cooke and his associates seems to have been suggested by Professor Rafinesque, with

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* Page 89. The Eclectics were characterized for their extensive learning, and their remarkable lack of medical bigotry. Galen himself professed to be of their number, and he derived from them many of his procedures and doctrines. The Eclectic school flourished for sever l centuries, till the religious and political changes had transformed the constitution of the Roman Empire, and obscured all scientific learning.

whom Dr. Cooke was familiar, and who was then living in Philadelphia.*

The next step was the organization of the "*Eclectic* Botanic Medical Association of Pennsylvania," in place of the society over which Dr. Howell had presided. This was effected on the tenth day of October, 1840.† The preamble and constitution set forth the objects to be organized activity, and the devising of means for the practical and theoretical instructions of medical students. The organization was afterward expanded into a broader field, and continued about thirty years, under the name of the Eclectic Medical Association of Pennsylvania.

DR. MORROW'S OVERTURE FOR ORGANIZATION.

The action and course of policy indicated by the organization at Philadelphia, soon met with a very wide approval. Dr. Beach early signified his gratification. Dr. Morrow went further, and welcomed it as opening the way for a general union of all the Botanic Schools.

Dr. Morrow had enlisted in the cause of Reformed Medicine from conviction. He had devoted his energies and private fortune to the upbuilding of the institu-

* They had purchased the plates of Professor Rafinesque's treatise on the *Medical Flora of North America*, and reprinted a part of the work in the *Reformer*. It will be remembered that in this work Rafinesque had described the various classes of physicians, naming *Eclectics* among them. "The Eclectics," said he, "are those who select and adopt in practice whatever is beneficial, and who change their prescriptions according to emergencies, circumstances, and acquired knowledge." Writing to Dr. Beach, in 1840, he gave his adhesion to the American Reformed Practice, in contradistinction to the "Mineral" and Thomsonian.

† Among the members were Doctors Thomas Cooke, Persius F. Sweet, W. Brooks, O. K. Sammis. Dr. Sweet was elected president, and Dr. Henry Hollembaek, secretary.

tion at Worthington. He was not easily disheartened. When financial disaster in the country and furious persecution had made it unwise to continue longer in that place, he perceived in this experience a call to a wider field of activity. It was a political war-cry at that period, "The union of the Whigs for the sake of the Union." As if taking a suggestion, the Eclectic Medical Association of Pennsylvania was preparing for an analogous union of Botanic and Reformed physicians, for the sake of reform in the Practice of Medicine.

Dr. Morrow now assented cordially to this proposition. He desired earnestly an abatement of the animosities, and a final terminating of the angry controversies between Medical Reformers. Because of the want of union, he wrote to Dr. Cooke, all efforts for the accomplishment of the great ends so much desired, must of necessity be only partially successful. "I hope the period is not far distant," added he, "when the friends of Medical Reform will take such measures as will lead to the most perfect union, preparatory to the making of a great concentrated effort in the cause in which they are engaged; and I believe that the present would be a most favorable moment to set on foot some plan which would lead to the consummation of that object."

Dr. Morrow accordingly proposed that a Convention of the friends of Medical Reform in the United States, should be held at Harrisburg, Pittsburg or Baltimore. It was to be composed of all who were in sympathy with the purpose, who might choose to attend, "whether professional or not, or whether belonging to one division of the Botanic Fraternity or another."

The object of the Convention was explained to be to adopt measures to result in the common good of all.

Writing again in December, Dr. Morrow gave a more complete synopsis of the matter. He proposed that the Convention should appoint a National Executive Committee with power to superintend the interests of Medical Reform. That Committee was also in its turn to appoint sub-committees in every Congressional district in the Union, for the purpose of obtaining subscriptions to a fund not to exceed one hundred and fifty thousand dollars.

The purpose of this fund was to establish a National Reformed Medical Institution for instruction, which should be capable of accommodating five hundred to one thousand students. In connection with the Institution, he further proposed to have an Infirmary or Hospital for the reception and treatment of patients. This would afford an opportunity for preliminary training in clinical practice, which at that time, was seldom to be obtained.

The site for this National Medical University was to be at a central point in the Union, which should combine the greatest number of advantages, and where the citizens would be willing to make liberal contributions, and the Legislature would grant a charter with suitable privileges.

Dr. Morrow submitted a further plan for the organizing and maintenance of the proposed institution. He made it an imperative condition, however, that the professors should be men thoroughly versed in every department of medical knowledge, and devotedly attached to the cause of Reformed and Botanic Medicine.

In a third letter to Dr. Cooke, from Worthington, Dr. Morrow stated that the proposed measure was meeting general favor. Even Dr. Alva Curtis seems to have intimated an approval. At Philadelphia every voice was raised in favor of the proposition. The Eclectic Botanic Medical Association adopted the following resolution :

Resolved, That this Association do cordially agree with Professor T. V. Morrow in regard to the expediency of calling a National Convention of the Reformed Brotherhood, for the purpose of bringing about a full, complete union of sentiment and action ; also, in the plan of founding a Medical College as a means of elevating the Botanic Systems of Medical Practice to the basis of equality with the other sciences of the age, which it so richly deserves."

REASONS FOR A NATIONAL ASSOCIATION.

In another letter, Dr. Morrow considered the obstacles in the way of a National Association. The principal impediment was the jealousies existing, and the embittered feeling which practitioners belonging to the several divisions of the Botanic school entertained toward one another.

As a means to obviate this unfortunate condition, he suggested that a single journal should be established which should combine and concentrate the benefits to be derived from the talents and experience of Medical Reformers of every sect. This, he believed, would tend to assuage the animosities so widely prevailing.

He also pleaded that common interest required the proposed combination. The improvements and discoveries made by Reformed and Botanic physicians

were constantly filched from them, and made public as having originated with others. At the same time, the men who had the right to the credit and advantage were "proscribed, persecuted, slandered and abused by the merciless parricides of human weal, in a spirit of execrable vengeance and unwarrantable malignity, which invoke unsuccessfully the history of the Darkest Ages of Gothic Barbarism to afford parallel instances."

OVERTURE FOR A NATIONAL ASSOCIATION REJECTED.

When Dr. Morrow stipulated in his plan for union that the professors in the proposed National Medical University should be intelligent in every department of medical knowledge, it must be acknowledged that he, perhaps unwittingly, had wounded many ambitious individuals in a sensitive place. The apprehension of being relegated to some position of minor significance was enough to rouse their hostility. Some other pretext would, of course, be put forward, but this would be the secret motive.

There was, likewise, somewhat of the sectional animosity existing which afterward had so unfortunate a culmination. The rejection of the proposed union of Botanic physicians in a National Association came from Dr. Bankston, of the Botanico-Medical College at Forsyth. It was the partisan pitting himself against the statesman. Dr. Bankston published a letter to Dr. Curtis, in which he scorned the proposition, and endeavored to screen his malevolence by assailing the motives of others. He made an angry reference to former controversies, and taunted Dr. Morrow with a desire to waft a "falling fraternity"

upon the tide of a rising system. He knew of none, he averred, who used the lancet and calomel with more freedom than some of the graduates of the Worthington School, and concluded with this ultimatum:

"We have nothing to do with Doctor Morrow, and I am sure that the Thomsonian Fraternity in general wants nothing to do with him until he shall adopt their leading Principles of Medicine."

Dr. Morrow in reply denied the imputations made against him. He likewise questioned the authority of Dr. Bankston to speak for the general body of Botanic physicians. It was worse than useless, he added, to propose any one of the systems of Medical Reform for the indiscriminate adoption of all Reformers. Those who really desired to promote the leading interests of the great common cause, must be willing to adopt all valuable improvements, whatever the source from which they might come. He had himself, for the important purposes indicated, earnestly advocated the union of all Medical Reformers on these principles of reciprocal justice and liberality, and he would never consent to a union on any other grounds.

"THE REFORMED MEDICAL SCHOOL OF CINCINNATI."

Dr. Morrow's overture for a common alliance of Botanic physicians to establish a National Association and Medical University, was thus contumeliously rejected. He was, nevertheless, by no means disheartened. The time was not ripe for a movement of such significance. He was, perhaps, not patient under upbraiding and misrepresentation, but he was courageous and resolute. If those who esteemed them-

selves his peers and superiors contradicted and reviled him, it was to him a voice commanding him to employ his energies in another field.*

He was compelled by the stress of the times to suspend his work at Worthington. Doctors A. H. Baldridge, L. E. Jones, and others of his associates, pointed out the advantages of Cincinnati. He was also led to suppose that the law admitted students of the several medical schools or colleges on equal terms to the Commercial Hospital to witness the treatment of diseases and such surgical operations as might be performed.† On the other hand, Dr. Watson, a former professor at Worthington, who had turned back to the old practice, pleaded hard to dissuade him, declaring that if he attempted to introduce the Reformed school there he would meet with utter defeat. Dr. Morrow, however, was not deterred, but promptly removed to Cincinnati. He soon established a foothold, and others coming, the difficulties actually existing soon began to disappear.

The next season, the "Reformed Medical School of Cincinnati," was opened.‡ It was by no means encouraging; there was but a solitary student. Dr. Morrow was not long, however, in enlisting supporters. Two terms were held in each year, as at Worthington, and in 1844, the *Western Medical Reformer* was revived. The prospectus announced as its aim and purpose: "To effect a permanent and salutary reform of the Healing Art in the most enlarged and

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* Compare *Acts of the Apostles*, xiii., 44, 45, 46.

† By some hocus-pocus the physicians having control of the institution evaded this provision of law for several years.

‡ The professors were Drs. T. V. Morrow, Lorenzo E. Jones, A. H. Baldridge and James Kilbourne, Jr. Dr. Kilbourne died a year later.

liberal spirit of Medical Eclecticism." It defined this to be—to discountenance all remedial agents which tended directly or indirectly to injure the stamina of the human constitution, and to maintain the proposition that "successful treatment does not, in any case, require the use of medicines that are attended with any risk to the present or future health of the patient."

THE ECLECTIC MEDICAL INSTITUTE INCORPORATED.

Another course of lectures for the spring and summer of 1845, had been duly announced. The Reformed Medical School of Cincinnati was in its third year; and although it had no legal authority to confer the degree of Doctor of Medicine, its classes numbered about thirty genuine students of medicine. The success warranted the asking for an act of incorporation. An application was accordingly made to the General Assembly, signed by the Mayor of Cincinnati, by members of the City Council and by eleven hundred citizens, many of them of the highest respectability.

Colonel James Kilbourne, so long the mainstay of the College at Worthington, was now the untiring champion of the desired legislation. He attended the meetings of the legislative committees, and labored with members individually in its behalf. It passed the House of Representatives with little objection, but met a strenuous opposition in the Senate. Its friends in that body procured an order to refer it to the Committee on Corporations, that it might not be smothered or defeated by intentional misdirection.

Meanwhile, the professors of the Medical College of Ohio employed every art at their command and put

forth their entire energy, social and political, to secure its defeat. They attempted to obtain remonstrances, but these had less than sixty signatures, many of them of physicians of their own party. The bill was reported with the recommendation that it should become a law.*

Dr. O'Ferrall, the chairman of the Committee on Medical Colleges and Medical Societies, was frantic in his opposition to the proposed legislation. He attacked the motives and reputation of those interested in it, making the grotesque and extraordinary assertion that "Medical science does not need, nor is it susceptible of further improvement, or reform."

He finally moved to postpone the subject till the ensuing December. This was lost by a vote of ten to seventeen, and upon the final reading the bill became a law.

The Reformed Medical School was now "The Eclectic Medical Institute of Cincinnati."

Dr. Morrow promptly announced the triumphant event in the *Western Medical Reformer*. "The passage of this bill for the establishment of a Reformed Medical College by the great State of Ohio," said he, "is but another of the long list of evidences showing the rapid progress of light among the People, on the subject of Medicine, and the growing prospects of the Reformed Practice. Our College will be in successful operation in a few days, with a Faculty of six pro-

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* Governor E. E. Eckley, the chairman, made the following emphatic statement, itself worthy to be the supreme law:

"It is a right guaranteed to every corporation that has given themselves a name and made application to the Legislature to receive 'letters of incorporation;' and your committee believe that when an application is so made, *it is the obligatory duty of the Legislature to give them their rights under the constitution so guaranteed.*"

fessors, fully competent to give instruction in all the departments of Medical Science. The charter is perpetual, and confers all the powers and privileges possessed by any Medical College in the United States."

"Our College will be strictly what its name indicates—ECLECTIC—excluding all such medicines and such remedies as 'under the ordinary circumstances of their judicious use, are liable to produce evil consequences, or endanger the future health of the patient,' while we draw from any and every source all such medicine and modes of treating disease, as are found to be valuable, and at the same time, not necessarily attended with bad consequences."

The new Board of Trustees began promptly the work of organizing and establishing the Eclectic Medical Institute. The Hon. Henry Morse, a prominent citizen was elected president, and Doctors Thomas V. Morrow, Benjamin L. Hill, Hiram Cox, Lorenzo E. Jones, James H. Oliver and Alexander H. Baldridge, appointed professors. The act of incorporation authorized a capital of twenty thousand dollars, and required that before the College could do business, it should possess half this amount. Promissory notes payable in five and ten years were issued with a view of meeting these conditions.

TESTIMONIAL TO COLONEL KILBOURNE.

It remained for the friends of the new corporation to make some appropriate acknowledgment to Colonel Kilbourne. A meeting was held at the College Building, at Worthington, at which Dr. Morrow, in the presence of a large assemblage, presented to him in their name a silver pitcher, duly ornamented and

inscribed. Then, addressing the worthy recipient, he recounted the operations of the Reformed School of Medicine, beginning with the endeavors of Doctor Beach, and the achievements at Worthington. "We were assailed on every side by the mass of the medical profession," said he, "and were regarded with an eye of suspicion by the people. But by the kind and efficient aid of yourself and worthy colleagues of the Board, and by our untiring exertions, we were enabled to accomplish much with the aid of such others as joined us during the ten years of its existence here.

"Since then, by the aid and influence of the friends of this benevolent enterprise, and the assistance of others having kindred objects in view, the illiberal and intolerant spirit of Medical Monopoly has been rebuked on every side.

"State after State has marched forward to the noble work, and blotted out—*it is hoped for ever*—from their statute-books, all laws granting exclusive privileges to one class of medical practitioners to oppress another; thus placing each class before the community on its proper merits."

Dr. Morrow alluded to the prospects in terms indicative of his sanguine temper and resolute fidelity to conviction. He had gone to Cincinnati, he said, with the avowed purpose of laying the foundation of an institution similar to the former college at Worthington. Cautious friends and others had endeavored to dissuade him. It was unequivocally hinted to him that if he had the temerity to oppose the popular practice at Cincinnati, as he had done before, his prospects as a physician would soon be hopelessly crushed beneath the overwhelming power of the medical profession of that city. Not being accustomed to

that species of restraint, which would impose upon him the obligation to refrain from the performing of what he conceived to be the highest and most imperative of duties, he could not pause to calculate consequences. "I forthwith announced myself in the most public way," said he, "as a candidate for the practice of medicine according to the Reformed system. In addition to this, I also proposed delivering a course of public lectures the ensuing fall and winter. I soon succeeded in getting an extensive practice, and gathering around me a small but respectable class of students. Shortly afterward I was joined by other members of the Reformed school, who unhesitatingly hoisted the same colors and gallantly aided in planting the standard of that cause, which it was our pride and pleasure to maintain."

Colonel Kilbourne replied with an eloquent tribute to Dr. Morrow and his associates. Years before he had heard of Dr. Wooster Beach, the great Apostle of Medical Science, he had become convinced of the indispensable necessity of a change in this important concern. His convictions were as strong at forty-five years of age as they were now at seventy-five. "In my own person, during the years 1815-16, and *since*," said he, "I suffered more from a constitution then ruined by calomel, than I would have consented to endure, anticipating the results, for all the wealth ever possessed by men, and the honors that were ever in their gift."

These opinions, thus early and crudely formed of the need and practicability of a great and radical change in the practice of medicine, he had found sustained, and much more exhibited than he had anticipated, in this great system of Reform. Colonel

Kilbourne then reviewed the promise of progress in medical matters over Europe, and concluded with declaring his confident anticipations that the institution now established in the Queen City of the West would succeed and prove a lasting benefit to the country and to the great family of man.

EFFORTS TO ADVANCE THE CAUSE.

The Eclectic Medical Institute was now launched upon its career as the exponent of the American Reformed Practice of Medicine. Dr. Morrow addressed himself with new energy to the effort to assure its permanent prosperity. In 1845, Dr. Wooster Beach was appointed to the Chair of Clinical Surgery and Medicine. This added to the prestige of the College by identifying with it the veteran founder of the new School of Medical Practice. Dr. Joseph Rodes Buchanan was also chosen Professor of Physiology, Institutes of Medicine and Medical Jurisprudence. He was also associated with Dr. Morrow in the conducting of the *Western Medical Reformer*.

In his letter of acceptance, Dr. Buchanan gave a synopsis of his peculiar concepts of Neurology and cerebral physiology, of which he claimed the discovery. He believed that the Eclectic Medical Institute had made decided progress in this department, and he proposed to carry on his experimental inquiries to practical results. To acquiesce, even partially, in the medical science of the day, with its blank and profitless department of Neurology, and its confused and defective Materia Medica, he declared, "would be a gross neglect of duty to the medical profession." He would endeavor to render the Institutes of Med-

icine an exact and valuable department of medical science.

By no means, however, did Dr. Morrow contemplate to limit his future efforts to the establishment of a single institution. He cherished still the hope of a union of Medical Reformers of various shades of sentiment in a fraternal alliance. He continued accordingly a friendly correspondence with them, wherever his overtures were not repelled.

He now began to make use of the term *Eclectic* as a designation of those who accepted his views. In 1849, the Faculty of the Eclectic Medical Institute put forth a *Circular Address to the Medical Profession of the United States*, in which they declared explictly their position :

"The leading doctrine of the Eclectic Medical Profession, to sustain which this Institute has been established, is: That the investigation and the practice of Medicine should be entirely free and untrammelled ; that no Central Body—no association, combination or conspiracy—should have the power to prescribe a certain *standard of faith* or *Medical Creed* which shall be received and forced upon every member of the profession by threats of professional disgrace and ruin. We recognize every enlightened, educated and honest physician as standing upon the same platform of professional respectability, and enjoying the same rights ; no matter what doctrines he may advocate in medicine, or what system of practice he may deem it his duty to adopt."

Doubtless this manifesto was prompted to a great degree by the position which had been taken by the dominant persecuting branch of the medical profession. It was a sore fact for them, which they took little pains to conceal, that the repeal of the restrictive laws in the several states had left them as was ex-

pressed, "unable to compel their brethren to practice in accordance with the views and wishes of the majority." They resolved therefore to institute a boycott by means of which to proscribe and punish those who would not yield. "The most effective blow would be given to the new-born heresy," said Dr. Henry G. Piffard, "if the profession as a whole combined against it." Accordingly a conference was held in New York, in 1846, by which the American Medical Association was brought into existence for this purpose. It had two principal objects: to grasp and hold all lucrative offices in the army and navy, the civil service and hospitals; and to unite against the Reform and independent practitioners to deprive them of reputable social standing and to drive them from the field. In order to accomplish this more certainly, a Code of Ethics was adopted excluding from fraternal courtesy and just recognition as professional persons* all who were not in harmony with its conditions, and requiring absolute adherence to these conditions, even when human life was at stake.

The ablest jurists have not hesitated to declare this code "a combination against common law and a conspiracy against the public health." Conscientious practitioners refused to be bound by it. Mr. Lawson Tait declared that he considered it his duty to lend his services in friendly consultation to a qualified young practitioner, regardless of his views of theory and practice. "We must educate the medical pro-

* Several lawsuits grew out of this conduct here prescribed, one of which, a marked example, resulted in a verdict of exemplary damages.

Two clergymen of different communions once met at a public place. "I can acknowledge you as a gentleman," said the Bishop to the Presbyterian, "but not as a Christian." The other replied: "And I can acknowledge you as a Christian, but not as a gentleman."

fession up to the recognition of the higher law," said the late J. Marion Sims, "the unwritten code that regulates the intercourse between gentlemen."

Against such conscienceless proscription, Dr Morrow sought to combine the several schools of Reformed and Botanic Medicine. He believed that they would become more harmonious if they but knew one another more familiarly. Perhaps, if he had lived a few years longer, he would have witnessed somewhat of the realization of the hopes which he had so ardently cherished. The other Reformers, who were like the "other sheep" of the Gospel,* who were also proscribed, would have been led by the same catholic spirit of fraternal charity to similar conclusions, and have united cordially in one common alliance, upon a common platform, of all rights for all, special privileges for none, but emulation to know and realize what would be best for all alike.

With such purposes and convictions, with no design or desire to place himself and associates as umpires and leaders, did Thomas V. Morrow adopt for the college which he had founded, and for himself and fellow-laborers to the same end, the designation of ECLECTIC.

SCIENTIFIC AND ECLECTIC MEDICAL INSTITUTE.

The first chapter of the history of the "Scientific and Eclectic Medical Institute of Virginia," are apt illustrations of "the best-laid plans of mice and men." The bill to incorporate the proposed institution was introduced in the House of Delegates, and passed that body in January, 1846. It is a not unfrequent error of

* *Gospel according to John*, x. 16.

individuals to suppose that the action of a single body is that of the entire legislature. Dr. Henry M. Price, the editor of the *Southern Medical Reformer*, and originator of the proposed measure, actually made such a mistake. He wrote exultingly to Dr. Morrow, and to Dr. Thomas Lapham, of the Poughkeepsie *Thomsonian*, declaring his success in procuring a most liberal charter, and giving a glowing account of his plans. A building was to be erected in Richmond. and abundantly supplied with apparatus in every department. Especial attention would be given to Medical Botany, and to rendering the student a practical botanist. The practice inculcated was to be "strictly upon Eclectic principles." The friends of the Reform practice, it was remarked, had confined themselves too much to the principles and practice of one—or at farthest, a few individuals; disregarding in their abstract ultra views, many safe and valuable remedies, simply because they are opposed to the many deleterious remedies with which they are conjoined." He proceeded to delineate in glowing terms, the purposes in contemplation. There would be an extensive building and suitable apparatus for every department. Medical Botany, now so generally neglected by Medical Colleges of every School, was to receive special attention, and pains taken to render every student a thorough, practical botanist. "The practice inculcated will be strictly upon Eclectic principles," he wrote to Dr. Morrow. "The only means to arrive at perfection in any branch of science," he significantly added, "is not by following the *ipse dixit* of any man or set of men, but by applying the '*Eclectic Torch*' to all, rejecting their errors and gleaning their truths."

The bill, nevertheless, was reported favorably in the Senate, and passed that body on the fifth day of February, by a vote of seventeen to eleven. All thus far seemed fair, as well as fortunate. It was in the latter part of the week, and several Senators, supporters of the measure, had as usual left Richmond for home. The adversaries, prompted by the professors of the Medical College in the city, seized the opportunity to procure a reconsideration of the vote of the previous day, several who had voted for the bill now acting with them. Dr. Baptist, though of the Old School, was earnest in opposition to the artifice, and made a strong effort to postpone the vote till the supporters had returned. This was refused and the measure was lost by a vote of seventeen to six in the affirmative. It was not a second thought, but an artful trick worthy of an unjust cause. Dr. Price was deeply chagrined, but determined to renew the matter in 1847. This time he was successful.

The new college, however, was established at Petersburg instead of the capital. No time was lost in securing an effective organization. Dr. Price himself took the chair of Materia Medica and Dr. Charles J. Kenworthy, his former student, was professor of surgery. Dr. Isaac N. Comings, a professor at Forsyth, a man of somewhat pragmatic temper, and afterward a writer of ability and reputation, accepted the chair of Theory and Practice of Medicine. All these were educated men and able instructors. Dr. John Thomas became professor of Chemistry. He was a native of London and the son of a Congregational minister. He had enjoyed the instruction of the ablest teachers of surgery and medicine ; among them Abernethy, W. W. Sleight, Sir Astley Cooper, and Sir

Charles Bell. He possessed a restless temper, and was an enthusiast in politics and religion. Hopeless of any reform in medical procedures at home, he had come to America, only to find matters worse. He would have returned but for his strong republican proclivities. For a time he made his home in Richmond, where he maintained a theological controversy with the Rev. Alexander Campbell. He removed to Illinois, and was elected president and professor in the Franklin Medical College. Resigning these appointments, he returned to the East. Fond of the study of Medicine, he had become disgusted with the practice, and with the routinism of the men who made of it a mere trade by which to gain a livelihood. In all his opinions, medical and philosophic, he was eclectic. He insisted upon a radical reform in the organization, theories and practice of the medical profession. He strenuously denounced the general practice of the Medical Colleges* all over the United

*J. B. GALLOUPE, in *Boston Medical and Surgical Journal*, "It is not unusual for one to pass with one stride, *ex fabrica*, to a physician's office, where he tarries just long enough to leave his name. Then returning to his occupation, he pursues that, while he is nominally a pupil in medicine. When the Lecture-term commences, he bids a hasty farewell to his workshop, and soon enrolls himself as a member of a Medical Class. He matriculates, pays the fees, hears the Introductory lecture, and then returns to his laudable and appropriate employment. In this way the three years of probation are spent; at the end of which he is summoned before the Faculty for examination and approval. With a consciousness of his deficiencies and with fearful forebodings as to the results, he seats himself in their presence. After stating the medical properties of *oleum Ricini*, missing a few questions in chemistry, telling how many extremities the *femur* has, and giving a practical demonstration of *paralysis agitans*, he is declared competent, and sent out into the world to take charge of the lives and health of the community. Such is the history of the tutelage of not a few of those who bear the title of 'M. D.' The requisites for graduation are merely nominal. No *attendance* upon the Lectures is required; and *the final examination is a mere pretense.* The fact is well known and taken advantage of by scores, who creep into our ranks with no more knowledge than could be acquired by a three month's study."

At the time when this was written, no medical school stigmatized as "irregular," had been thus guilty or derelict; and the writer was not treating of such.

States, in graduating men as physicians whose attendance at lectures was merely nominal, who had pursued the study of medicine for an insufficient time, and were shamefully illiterate in their general scholarship. He was appointed a professor with permission to select his own department, and made choice of Chemistry as being the pursuit most neglected. He also, at request of the Trustees, delivered the lectures upon anatomy, but only till a professor should be appointed. Dr. Paul W. Allen, of Massachusetts, a ripe scholar in medicine and classic literature, having graduated at the institution was chosen for the place.

Despite the original purpose of Dr. Price that the teaching should be Eclectic, like that of the Reformed Medical School at Cincinnati, the expectation was not realized. A spirit of hostility had arisen between the prominent instructors of the two institutions. Dr. Comings, like Dr. Bankston, was strenuously opposed to any affiliation.

The students at Petersburg, he boasted, were "no mongrels—none that advocate the peculiar notions of the Beachites." He further declared, assuming the authority of the institute :

"We wish it fully understood that our Institute is not the advocate of the peculiar notions of those termed Eclectics in the West, but that we are Eclectics in the broad sense of the word—which leads us to select from the accumulated wisdom of the past all that is truly valuable in Medical Science, and to reject that which is not found in accordance with those true principles which are founded on the natural laws of life."

That Dr. Morrow had been likewise provoked to

unfriendly feeling in his turn, is not improbable. He had been snubbed by Dr. Bankston, and again his overtures were repelled where he had expected friendly sympathy. His associate professor and editor, Dr. Buchanan, had had a disagreeable experience with Dr. Curtis and entertained no fraternal regard for that school of physicians. He took no pains to conceal his aversion and disdain ; and thenceforward opposed every attempt at union of the several parties of reformers, except upon the condition of subordination to the Eclectic Medical Institute.

The institution at Petersburg was short-lived. It had able teachers, but in several of them the love of ruling was too strong to permit of harmony and successful achievement. Dr. Comings was not long on good terms with his associates, and others were speedily discouraged. The auspicious beginning had an unfortunate ending, and the Scientific and Eclectic Medical Institute of Virginia passed out of existence and even out of memory. It was like the collapsing of a bubble.

CALVIN NEWTON.

A new advocate and champion had arisen in New England. Calvin Newton came into the field well equipped for the work.* He possessed not only ambition and superior mental training, but also the constructive talent of a statesman, and that fidelity to conviction which consecrated every other quality.

*Dr. Newton was a Baptist preacher and theologian. He had graduated at Union College ; after which he was five years the professor of Hebrew and Rhetoric at the institution at Waterville in Maine, and then president and professor in a Theological Seminary, and after that for five years the pastor of a congregation. He then engaged in the study of Medicine.

Finding his professional duties incompatible with his health he engaged in the study of medicine, and attended lectures at the Berkshire Medical College, of which Dr. Henry H. Childs was president. He often heard Governor Childs denounce what he called "the want of principle displayed by the Regular profession," and charge the physician with "often thwarting the recuperative efforts of nature, and seeking a cloak for his ignorance in the formidable technicalities of his craft."

Governor Childs also opposed strenuously the proscriptive medical legislation, so much sought for and often obtained by the sciolists and sophomores of the medical profession. There should be no persecution of the followers of other systems, he declared—no compulsory measures. "Vain are legal enactments," said he, "to supply the deficiency of a Scientific Faculty."

The physician, he insisted, "should be essentially Eclectic," explaining this as meaning, "not only to cull, to select, to adopt from all that is known, but to experiment, and to experiment on principle too, and to add to his armory new weapons for his daily warfare with disease."

Entertaining such sentiments Calvin Newton graduated in 1845, and began the practice of medicine. He styled himself an Eclectic and acted consistently with that profession. He had given the new remedies and procedures of the Botanic schools a careful attention and was convinced of their superior efficiency. He was, however, no blind adherent of medical leaders of any school. He was quick to perceive what he regarded as the shortcomings of Samuel Thomson and Alva Curtis, as well as what he considered the super-

ficial teachings of Wooster Beach. He was careful however to withhold from them no credit for the much which they had done, nor was he desirous to break off relations with their followers. He aimed instead, to enlist them with him in the purpose and effort to place the New School upon an immovable basis as a healing art and a learned profession.

"THE NEW ENGLAND MEDICAL ECLECTIC."

On the first day of January, 1846, he began, as the first necessary step, the publication, semi-monthly, at Worcester, of the *New England Medical Eclectic and Guide to Health.* In the first article he explained his position. He was pledged to sustain no class of physicians or mode of practice; he belonged to the Massachusetts Medical Society, and was in fellowship with his medical brethren, but he did not believe medicine incapable of improvement. "The time has come," said he, "in which to gain the confidence of the people. The medical practitioner must place himself on the platform of sound professional principles."

Such was the foundation of Eclectic Medicine in the Eastern States, and such the master-builder by whom it was laid. Calvin Newton stood upon an eminence to which few have attained. He was emphatically a man who "reverenced conscience as his king." Broad in his knowledge, pure of speech and contact, unselfish in his aims and lofty in his aspirations, he would never resort to unworthy means to accomplish an object, nor be an instrument to elevate unworthy men or to promote unworthy schemes; but he freely consented to give up personal honors, and to labor in an unpopular cause for the sake of doing good.

He aimed to unite the Botanic physicians, at that time discordant and even hostile to one another, and to lead them to higher ground, morally as well as professionally. He was to a degree successful, and Eastern Reformers rallied to his support; but he encountered fierce antagonism from Dr. Curtis and many of the other Botanic physicians. He persevered, however, and though often baffled and even deceived, he successfully accomplished what had been attempted before in vain, the establishment of a medical college in New England for the higher instruction of students.

THE MEDICAL SCHOOL AT WORCESTER.

In 1845, the sentiment had become general in the East that the standard of medical attainments must be raised higher. There had been repeated attempts to establish a medical college, but jealousies and diversities of judgment had led to their failure. Dr. Newton now took the matter in hand. He began by giving instruction to students in the several branches of medical knowledge at his own office in Worcester. The Uxbridge Botanic Medical Society also employed a lecturer, in the latter months of that year, to deliver a course. This was followed by a medical Convention in January, at which resolutions were adopted asking the two instructors to unite their labors, and agreeing to establish "the Worcester Medical School," with four chairs and a Board of fifteen Trustees; the Society assuming responsibility for the necessary expenses. The School was opened at Worcester in March, 1846, and the success was most gratifying to

all.* An application was made to the Trustees of the Southern Botanico-Medical College, of Georgia, to adopt this school as a branch of that institution. The Board of Trustees acceded to the proposition, and adopted resolutions recognizing "the Worcester Botanico-Medical College," and giving to its Faculty the full authority to confer medical degrees. The condition was prescribed, likewise, that all the professors of the Branch should be elected by the Trustees of the Mother College, with the qualifying proviso that all nominations and removals should originate with the Directors of the Branch Institution. Dr. Newton was then elected a professor, together with Doctors Isaac N. Comings, William H. Fonerden, and Lanier Bankston, who held similar positions in the College at Macon. Under this arrangement, a second term of lectures was held, and a class graduated.

This arrangement was then abrogated, and the students of the institution, for two subsequent seasons, received their degrees at the college in Petersburg.

Dr. Newton found his independent attitude as a physician and medical teacher was regarded by many with distrust and apprehension. Dr. Alva Curtis announced his purpose to establish a rival college in Boston. He addressed a letter to Dr. Newton couched in terms at once uncourteous, magisterial and overbearing. He belabored him for having taken the name of *Eclectic* for his school and journal, charging that he did this with a purpose to attract to him the

* A student, who had already attended a course at the Harvard Medical School, at Boston, declared positively, "that the lecturers here, upon the various branches of medical study, were superior to those who lectured upon the same branches in the Boston School."

followers of Dr. Beach. He demanded that the college at Worcester should be united in less than thirty days with the one that he was about to establish in Boston.*

Dr. Newton replied to these assaults firmly, and with dignity. The term *Eclectic*, he explained, had been adopted by him in 1845, when he was not aware that it was about to become characteristic of Beachism. He had changed it after discovering that fact.† He prefaced the explanation by a stern rebuke to Dr. Curtis for his ill breeding and vulgarity, adding the remark, significant alike in regard to him and to Dr. Beach: "Each of these gentlemen has had the means of knowing our position, and each seems equally offended that we do not call him *master*."

An arrogant man generally quails before a resolute opponent. Dr. Curtis was no exception to this rule. The time, nevertheless, was somewhat precarious for the College. The Thomsonian Society of Connecticut had just received a charter from the legislature as the "Botanico-Medical Society," with power to establish a school for the education of students for the Botanic practice. It had adopted a rigid Thomsonian platform, and many of its members regarded Dr. Newton with jealous apprehension. There was a passion likewise entertained by several of the number for the

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* Dr. Curtis was not delicate in his choice of terms. He denominated the physicians of the Reformed School, "the poisoning, blistering, cupping, bleeding, mongrelizing Beachites or Eclectics." It will be remembered that Dr. Morrow, in his response to the allegations of Dr. Bankston, in 1842, had utterly disavowed the procedures here imputed.

† The *New England Medical Eclectic* had been discontinued, and the *New England Botanic Medical and Surgical Journal* published in its place. After this the *Massachusetts Spy* described the school at Worcester as "Eclectic," and Dr. Newton took the occasion to explain that the term was used "by those in New England who belong to no medical clique, and have no party end to answer."

distinction implied by the collegiate title of Professor. Resolutions were adopted at the first meeting for the establishment of a full course of medical lectures, and for a conference with the Faculty of the Botanico-Medical College of Ohio to effect that result.

The friends of the enterprise at Worcester rallied to its support. The Bay State Medical Reform Association, of which Dr. Walter Burnham was president, was the first. The New Hampshire Botanic Medical Society, then just incorporated by the legislature, also signified its adhesion. The Thomsonian Society of the State of New York passed a vote of commendation. Dr. Curtis was abashed, and endeavored to restore amicable relations. The Connecticut Botanico-Medical Society held an adjourned meeting, and adopted resolutions nominating Doctors John W. Johnson and Isaac J. Sperry for Trustees of the College, demanding as a condition that Dr. Curtis and another candidate be appointed professors, and appointing a Committee to arrange terms of union between the Society and College.

The School at Worcester was organized anew, with the title of "the New England Botanico-Medical College." New members were elected to the Faculty. Dr. J. M. Buzzell, of Maine, became Professor of Surgery, and Doctors John Kost and E. Morgan Parritt, of the Cleveland Botanico-Medical College, were elected to other chairs. Dr. Alva Curtis was appointed Professor of the Theory and Practice of Medicine, but did not accept. Thus, the efforts to establish a rival school were discontinued, and for a season all seemed to be at peace.

Applications had been made to the Legislature of Massachusetts every winter, for an act of incorpora-

tion. The Chancellors of the Massachusetts Medical Society, Dr. Jacob Bigelow, Dr. John Ware and Dr. Henry Clarke of the Harvard Medical School, had vigorously and even fiercely opposed the measure. Four thousand petitioners, in 1848, had been granted leave to withdraw their application. This, however, was the last time. One of the opponents confessed, that so far as his knowledge extended, a majority of the community favored the Reform practice. That year for Dr. Newton and his associates, had been one of conflict; in which, however, they were always victorious. In 1849, they renewed their application and pressed it personally. On the tenth day of March, the bill to incorporate the "Worcester Medical Institution," had passed both Houses of Legislature, and received the approval of Governor Briggs.

This last name to the College was adopted because there was a disposition among Botanic Societies and physicians to change the name of their school of practice. The Thomsonian Medical Society of New York had obtained a certificate of incorporation by the name of *Physo-Medical.* The Bay State Medical Reformed Association, likewise organized anew as the "Massachusetts Physo-Medical Society," and adopted a constitution which Dr. Newton had prepared. The College of Cincinnati was also known thenceforward as the "Physio-Medical Institute," and Dr. Curtis, himself, formally disclaimed the title of *Thomsonian.* The purpose was universally apparent to lay aside all names that perpetuated the memory of Samuel Thomson and his exclusive procedures.

The act of incorporation granted to the Worcester Medical Institution did not authorize the conferring of degrees. They were now obtained from the Eclec-

tic Medical Institute of Petersburg. An amendment, however, was obtained for that purpose in 1851.

METROPOLITAN MEDICAL COLLEGE.

More than once had the position of Dr. Newton and the Worcester Medical Institution been exposed to severe criticism. Nevertheless, he went forward, working incessantly, and disregarding fatigue and hostility alike. Presently an unhappy controversy took place in 1850, between him and Dr. I. M. Comings. The project had been entertained to erect a building for the College, and Dr. Comings opposed it as certain to involve hopeless indebtedness. His language was harsh and often inexcusable. Tale-bearers aggravated the matter till finally Dr. Newton laid the matter before the Board of Trustees. He had been accused, he said, of irregularity in managing the affairs of the College, with embezzling money, and with granting diplomas without proper authority. The Board promptly exonerated him from all these imputations, and demanded of Dr. Comings to resign his professorship. Upon his refusing, they declared the place vacant.* Dr. Alva Curtis was again appointed to the chair of the Theory and Practice of Medicine, but curtly declined.

The occasion thus afforded, was eagerly seized for

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* Dr. Comings was a native of Maine, and had been for four years a student at the Waterville College when Dr. Newton was professor there. After Dr. Newton's death, Dr. Comings published an article in the New York *Journal of Medical Reform* for January, 1855, in which he declared that a warm personal friendship had existed between them, and intimidated that "the unfortunate variance," had been caused by falsehoods, fabricated by another person, probably meaning Dr. E. M. Parritt. He also affirmed that Dr. Newton "began to see the error of his ways," in affiliating with the Eclectic School. This, however, can hardly be credited.

a rupture. Several prominent practitioners in Connecticut had felt aggrieved at not receiving appointments as professors. Dr. Comings lost no time in communicating with them, and almost immediately a special meeting of the Botanico-Medical Society was called for the twelfth of September. The purpose was specified distinctly to be for the establishing of a new college. Dr. Curtis was present at the meeting, and likewise a delegation from New York by special invitation. The discussions were marked by bitter and coarse vituperation.* A resolution was adopted declaring "that this Society considers it indispensably necessary that a course of Medical Lectures be given in New York the coming winter or spring, as it has no confidence in the Institution at Worcester as now conducted."

The Physo-Medical Society of New York had made repeated efforts of aforetime to establish a Medical College in that state. It eagerly accepted the overture from the Society in Connecticut. Doctors Curtis and Comings were assiduous in fanning the excited feeling. A committee was appointed to coöperate in carrying the proposition into effect.†

The institution was incorporated under the laws of 1848, and began operations with a faculty consisting of Doctors Alva Curtis, Isaac M. Comings, Theodore S. Sperry, I. N. Loomis, Joseph D. Friend and Silas

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* The terms of the call for this meeting were gross and offensive. Dr. Newton retorted in his *Journal* in language at once audacious and sweeping. He acknowledged the services of Samuel Thomson to Medical Reform, but arraigned him for "his ignorance and his disgusting immorality," and challenged his supporters to tell "where is the *first fundamental systematic* truth which owes its birth to any originality of his."

† This committee consisted of Doctors Joseph D. Friend, William Jones, Hermes M. Sweet, J. B. Vail and Hosea Winchester.

Wilcox.* For years the prevailing sentiment was unequivocally brutal toward the Eclectic School of practice. Nevertheless, there was a decided softening of feeling on the part of Botanic practitioners, and partisan sentiment steadily diminished. In 1852, the National Convention of Physio-Medical or Physopathic physicians at Baltimore adopted a platform which, while vigorously denouncing the use of mineral and vegetable poisons as remedies, nevertheless, allowed a wide latitude in other respects.

In 1857, Dr. Friend, who was somewhat of a politician, succeeded in obtaining from the Legislature of New York a special act of incorporation for the Metropolitan Medical College. Measures were immediately set on foot to assure it an endowment.

The Physo-Medical Society had all along fostered the College as its own offspring. It now took steps in accordance with the liberalizing tendencies, then active, to broaden the scope of its operations. Liberal physicians of every shade of sentiment, were invited in cordial terms, to attend the annual meeting of 1858. The Constitution was amended,† and the name changed to that of the "New York State Association of Reform Physicians." Many practitioners who had been identified with the Eclectic School, now signed the roll of members, and prominent physicians

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* In subsequent years, Dr. Lanier Bankston, of the College at Macon, and Dr. William H. Cook, who had been a professor in the Syracuse Medical College, and afterwards was dean of the Physio-Medical College, at Cincinnati, became professors. Dr. Cook for a season conducted the *Journal of Medical Reform.*

† Article III, which was then adopted, prescribed the standard of membership. "Any Doctor of Medicine who believes in sanative medication, and accords to each member of the profession the privilege of selecting his remedial agents from any and all sources, according to the dictates of an enlightened judgment, based upon the general principles of physiology, pathology and therapeutics, may become a member of this Association."

of the New York State Eclectic Medical Society, from the western counties of the state, dropping their organization, affiliated with the Association.*

Letters were presented from Drs. Walter Burnham, J. W. Johnson and Ellsworth Burr, of the Worcester Medical Institution, proposing a union of the two Medical Colleges. It was received with favor and the Board of Trustees of the Metropolitan College named a Committee of Conference to arrange the terms.

The administration of the College, at this period, was in harmony with the prevailing sentiment. The Faculty was evenly divided; Doctors Levi Reuben, William W. Hadley and J. T. Burdick, holding chairs with Doctors Friend, Sweet, and H. A. Archer.

Everything seemed propitious for the future. A proposition to procure an endowment of ten thousand dollars for the institution was now entertained, and an appeal was made to the friends of Medical Reform to contribute generously. All parties were represented in the appeal; which was signed by Dr. Wooster Beach, Elijah Whitney, A. P. Hale; also Doctors Walter Burnham, J. W. Johnson, F. H. Kelley, and Ellsworth Burr, and eight or nine original Thomsonians. The apparent union and harmony were unexampled.

Eras of good feeling, however, are often succeeded by periods of angry strife. This was painfully illustrated in the subsequent history of the Metropolitan Medical College. Jealousy and rivalry came in to

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* Among them were Doctors J. T. Burdick, Levi Reuben, D. E. Smith, Lyman Stanton, V. A. Baker, A. P. Hale, W. W. Hadley Dr. Wooster Beach addressed the meeting, declaring himself gratified with the proceedings and in cordial sympathy with the Association. Doctors William Paine and Henry Hollembaek, of the Eclectic Medical College of Pennsylvania, were also present, and expressed their general sympathy.

mar the work which had been begun. The Reform journals of the Southern States gave the alarm that the Eclectics would gain control, as they had of the Worcester Medical Institution. The infection soon revealed itself in a struggle to maintain the Physopathic ascendency.

At the next annual meeting of the Trustees of the Metropolitan Medical College, summary measures were taken to assure the matter. The Committee of Conference was discharged without making a report, thus putting an end to all negotiations for union with the Worcester Medical Institution. Resolutions also were adopted establishing a platform and requiring the professors absolutely to teach in conformity with its terms. All subscribers to the endowment fund were formally released if they did not approve of this action, but no notice was given them of the matter. The recriminations followed, as are usual in such quarrels, and the schism extended from the College to the State Society. Doctors Hadley and Reuben retired from the Faculty, and Doctors W. Durrant and V. A. Baker took their places.

An attempt was made in the Reform Medical State Society to restore the ascendency of liberal sentiment, but in vain. The feeling was very strong, and the result was unfortunate, if not discreditable. In the Legislature of 1862, a bill was introduced into the Legislature of New York and passed, to repeal the act of incorporation. The Metropolitan Medical College thus ceased to exist, wounded to death by the animosities of its friends.

THE FIRST MEDICAL COLLEGES FOR WOMEN.

The movement for the instruction of women in medicine was set on foot in 1845 by Dr. Samuel Gregory, of Boston. He and his brother, Mr. George Gregory, prepared and published several pamphlets upon the subject; and in 1847, he delivered a series of public lectures, and announced his intention to begin a school for that purpose. He employed Dr. Enoch C. Rolfe for lecturer, and the school was opened on the first day of November, 1848, with twelve pupils.

The Female Medical Education Society was formed in the same month, with six members. This number was increased in the year following to a thousand. Its object was the sustaining of the new enterprise. The School continued in this way for three years, holding two terms annually, of three months each. It was incorporated by the legislature in 1850, and in 1852 took the name of the "New England Female Medical College." Its operations were now expanded, a complete Faculty provided, and a course of instruction established similar to that in other medical colleges.* Most of the professors employed were from the Woman's Medical College of Philadelphia. The General Court of Massachusetts granted it small appropriations for several years; and it was thus enabled to keep in operation with a fair degree of prosperity. After the Civil War, however, there was a marked abatement of zeal among its supporters, and a different tone of medical sentiment was developed. In 1874, the institution merged

* But few of the students, however, pursued a full course of study. As late as 1855, out of more than one hundred students, only six had graduated.

into the Boston University School of Medicine, with a Homœopathic organization.

The Woman's Medical College of Pennsylvania was founded in 1849, through the effort and influence of Mr. William J. Mullen. The General Assembly promptly gave it an act of incorporation the following year, and it went quickly into active operation. One of its first acts after this period was the granting of an Honorary degree to the veteran physician of Boston, Dr. Harriott K. Hunt, who had formally applied, year after year, to be admitted into the Harvard Medical School, only to be refused.*

After two years the management of the institution was changed, and its medical orthodoxy made more rigid and exclusive. The requirements for graduation were also more stringent, reducing the number. The new physicians, however, were excluded for many years from the medical societies and from professional recognition by their masculine peers.

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* As late as 1859, the graduating of a woman by the Starling Medical College in Ohio, was furiously reprehended in the *Lancet and Observer*, of Cincinnati. "Why not grant the degree to sucking babes," it demanded. "There never was a woman fitted to practice medicine, surgery and obstetrics, no matter how long she may have studied. The duties of the profession are contrary and opposed to her moral, intellectual and physical nature." Then referring to the fact that the Eclectic College and Eclectic Medical Institute had refused admission to women, it asks: "Is it then left for a respectable school to so far insult all gentlemen in the profession as to admit to the Temple of Esculapius those who have no right in it?"

CHAPTER XII.

MEDICAL COLLEGES AND ORGANIZATIONS.—CONTINUED.

We have seen that there were repeated endeavors to establish a permanent national organization of the physicians of the American Reformed School. As soon as Dr. Beach had fairly established his Medical Academy and Infirmary, he hastened to supplement it, and extend its field by the founding of the "Reformed Medical Society of the United States." Under the sanction of this body, the medical department had been opened at Worthington; and in 1836, a meeting of the graduates of the two institutions organized the "Reformed Medical Society," to embrace the Southern and Western States.

Medical societies and colleges in those days were closely allied, each depending vitally on the other. Dr. Morrow, in 1841, opened a correspondence with Dr. Thomas Cooke, with the avowed purpose, both of effecting a union of the several bodies of Botanic physicians and of founding a National Medical University, which should win the favor of all classes of the people. Unfortunately, his plans were frustrated by the jealousy and rancorous feeling which at that time was very active. Obliged accordingly to confine his efforts to a smaller field, he succeeded in the establishing of the Reformed Medical School of

Cincinnati, and in its incorporation a few years later as "the Eclectic Medical Institute." *

Medical legislation had been employed to keep the dominant School of Medicine in power and in the entire possession of official and political emoluments, and sanctioned the outlawry and merciless persecution of all physicians who dissented in creed or in remedial procedures. It had now been set aside. It was quickly manifest that this deprivation of arbitrary power, and perhaps of prestige, though perfectly in harmony with common justice and republican principle, would not be cheerfully accepted by the privileged class. The purpose was soon avowed, to use every effort at command to undo the work, to procure the restoring of the arbitrary conditions by which they had been supreme.† Accordingly, certain physicians of New York and Pennsylvania held a meeting in 1845 to organize the American Medical Association.

Dr. Morrow, like a true sentinel of freedom, was awake to the rising exigency. He proceeded immedi-

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* At this period the graduates and disciples of the Schools of New York and Worthington were variously designated by themselves and others as "Botanic," "Reformed," "American," and sometimes "Beachite." Dr. Thomas Cooke, who had been a student of Dr. John B. Howell, a Botanic physician from England, had taken the title of *Eclectic*, apparently at the instance of Professor Rafinesque, who described a class of physicians by that name; and Dr. Calvin Newton also adopted it in 1845, for his independent movement in the Eastern States. The designation was given to the College at Cincinnati at the suggestion of one of the Trustees, but with no purpose to apply it to the Reformed School of Practice. Dr. Morrow began to employ it tentatively, however, in the *Western Medical Reformer*, in 1846, to designate the Reformed Physicians, and finding it meet with favor, ventured presently to use it in preference to other appellations.

† Dr. Purdy in an address to the Medical Society of the City and County of New York, declared the objects to be: "*First and primarily*, to regulate the practice of physic and surgery; and *second*, to contribute to the diffusion of true science and to the knowledge of the Healing Art" It was required of every individual about to graduate at the principal medical colleges, as the condition of receiving the degree of Doctor of Medicine, that he should swear to adhere to the old procedures, or forfeit his diploma.

ately to open a correspondence with the leading Medical Reformers of different shades of sentiment, but of common liberality of purpose. He met favorable answers from a goodly number, warranting him to go forward. Accordingly, in the winter of 1848, the following call was issued :

CALL FOR A CONVENTION OF REFORMED PRACTITIONERS OF MEDICINE.

Believing that the time has come when the friends of Medical Reform should establish an organization in order to promote that cause, in the prosperity of which they are vitally interested, the undersigned, in accordance with the wishes and inclinations, signified to them by letter and otherwise, of a large number of practitioners of the ECLECTIC REFORM SCHOOL, have designated Thursday, the twenty-fifth day of May, 1848, for the holding of the Convention of such practitioners of Medicine, in the city of Cincinnati, Ohio, to take such action as may be proper. The Hall of the Eclectic Medical Institute is offered for the Session of the Convention. The demands for the service of enlightened Reformed physicians everywhere, the interests involved in the enterprise, the efforts of the enemies of Medical Progress to crush the advocates of Reform, and the necessity for union and concert of action among our own members, constitute reasons for the proposed action at the present time.

It is hoped that the liberal and independent members of the Medical profession will coöperate with us, especially all who sincerely desire a reform in the condition and practice of the Healing Art. We an'icipate much pleasure in meeting with those who have been faithful sentinels on the watch-towers, who have both led in common with ourselves for the establishment of great and important principles. Let our professional friends, from every quarter of the country, make it convenient to assemble with us on this occasion, prepared to contribute to its success by communicating the improvements and discoveries which they have made, and by reading or discussing

such original papers as they may choose to present in reference to any of the departments of their profession. They will also aid us by the wisdom of their counsels in regard to measures that will assure the achievement of important results, and contribute to the elevating of the practice of medicine from its present low, unscientific and otherwise objectionable state, to a condition higher, nobler and more worthy of a learned and beneficial profession.

Wooster Beach, M. D., N. Y. City.
T. V. Morrow, M. D., Cincinnati, Ohio.
L. E. Jones, M. D., " "
A. H. Baldridge, M. D., " "
Jos. R. Buchanan, M. D., " "
B. L. Hill, M. D., " "
J. H. Oliver, M. D., " "
P. K. Wombaugh, M. D., " "
J. Wilson, M. D., " "
I. J. Avery, M. D., Reading, "
David Jordan, M. D., Dayton, "
J. Davis, M. D., Greenfield, "
I. G. Jones, M. D., Columbus, "
J. S. Ormsby, M. D., Westmoreland Co., Penn.
A. Kendall, M. D., New Orleans, La.
Orin Davis, M. D., Mount Morris. N. Y.
H. J. Hulse, M. D., Louisville, Ky.
J. Sappington, M. D., Arrow Rock, Mo.
L. Oldshue, M. D., Pittsburg, Penn.
A. Brown, M. D., Cincinnati, Ohio.
J. Horton, M. D., " "
Robert S. Newton, M. D., "
John King, M. D., Owingsville, Ky.
J. R. Paddock, M. D., Maysville, "
Drs. Davis & Tebbs, " "
J. O. Bannon, Elizabeth, Ky.
Drs. Chase & Snyder, Dublin, Ind.
B. F. Judd, M. D., Greenville, Penn.
Thomas Cooke, M. D., Philadelphia, Penn.
Johnson H. Jordan, M. D., Indianapolis, Ind.
A. Teegarden, M. D., Laporte, Ind.
Drs. Beeman & Parker, Birmingham, Ohio.
E. Burley, M. D., Minerva, Ky.
Dr. Teerbell, Iowa.
Y. L. McNeill, M. D., Vicksburg, Miss.
A. Essex, M. D., Bethel, Ohio.
A. Stanton, M. D., Chicago, Ill.
Drs. Taylor & Loomis, Cincinnati, Ohio.

Cincinnati, March, 1848.

The Convention assembled pursuant to notice and remained in session three days. Dr. Morrow presided, and Doctors John King and L. E. Jones were appointed secretaries. A very full comparing of views took place, and a resolution adopted to organize permanently under the name of the "American Eclectic Medical Association." The forming of state and county societies was also recommended.

The second meeting took place on the fifteenth of May, 1849, at the period of the second visitation of Asiatic Cholera. A Constitution and By-laws were adopted, and the National Eclectic Medical Association was duly constituted. Dr Morrow was elected president, and a series of resolutions adopted denouncing combinations to proscribe members of the Medical profession, and declaring it incumbent upon Medical Reformers to be liberal, to abstain from disparaging remarks in respect to differences of doctrine, and to cultivate amicable relations. The issue between the Old and New School was defined in the following terms :

"The great struggle of the day in the Medical Profession is between the spirit of freedom, on the one hand, which is seeking for truth in science, and the spirit of conservative despotism on the other, which aims to perpetuate its power and doctrines by organized combinations, and by discountenancing or suppressing every attempt at Reform, whatever may be its merit or its source." *

* The American Medical Association here described, had established a code utterly proscribing and practically outlawing all physicians who did not conform to its doctrines and routine of practice. Its members were very foul-mouthed and bitter in denouncing them. The courtesy of well-bred gentlemen was laid entirely aside. The Medical Colleges were required to receive no medical student, however scholarly, who had received preliminary instruction from any of the proscribed physicians, and not to graduate a student who did not pledge himself to adhere to the procedures approved by the Association.

At the annual meeting of the Association at Cincinnati, in 1850, Dr. Joseph R. Buchanan was elected its president. Dr. Morrow was more zealous, therefore, in behalf of organization and general coöperation, not merely of disciples of his own School and doctrines, but as he had declared ten years before, of all intelligent physicians devoted to Reform in the practice of Medicine. He offered the following resolution, which was adopted without dissent :

"*Resolved*, That as the sense of this Association, it is the imperative duty of the Medical Reformers of the several States of the American Union to continue to protest against the existence of any unequal and oppressive laws, whatever, touching the practice of medicine and surgery, or the admission of the Faculties and students of the different Medical Schools to participation in the privileges of the several hospitals in the different states ;* and that it is their duty to continue to petition the legislative authorities of their states for the repeal of all such arbitrary, unjust and oppressive enactments."

This was the song of the dying swan. It was the last action of Dr. Morrow in the National Eclectic Medical Association. It was in keeping with his entire career, and with every avowed principle of Eclectic Medicine. He placed himself thus unequivocally and honorably upon record, and left an always-living testimony behind him that only a recreant will desire to controvert. He had given himself to the effort of his life, his private fortune to

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Some years after, two students of the Berkshire Medical Institution cured a man of white swelling, when the Faculty had arranged to amputate the limb. It was ascertained that they had learned this at Worcester, and they were promptly excluded from the class.

* In disregard of the law, the professors and students of the Eclectic Medical Institute were debarred from the Hospital in Cincinnati, and a similar exclusiveness was carried out elsewhere.

his work. In the coming July he passed from life. It was a premature ending, for he was still in the flower of his years. To the National Eclectic Medical Association, of which he was the founder and controlling spirit, it was a disaster that was never remedied. The Institution which he had been successful in establishing at Cincinnati entered upon a stormy career which was unfortunate to the cause, and by no means creditable to the individuals concerned.

ECLECTIC MEDICAL COLLEGES IN NEW YORK.

There was an impulse now extending over the country to establish seminaries for instruction in medical knowledge upon the Eclectic basis, and to organize Eclectic Medical Societies. The Reformed physicians of Pennsylvania had begun such action, many years before; and now with the successful establishment of the Eclectic Medical Institute and the National Eclectic Medical Association, a like enthusiasm was aroused in New York.

The people of the state had adopted a new constitution in 1846, of a very democratic and decentralizing character. An article prepared by the late Samuel J. Tilden provided that corporations might be formed by general laws. The Legislature of 1848 accordingly passed "an act for the incorporation of benevolent, charitable, scientific and religious societies."* This permission was eagerly embraced as

* This general act was amended repeatedly in order to include other organizations. The last amendment was made in 1870, in order to facilitate the incorporation and establishment of a university at Syracuse. A section indicates the scope: "*Every college or university incorporated under said act* [of 1848] *or under this act.*" The Central New York College at McGrawville, the Central, Syracuse and Metropolitan Medical Colleges, had been incorporated; and afterward the Syracuse University with its medical department, and the United States Medical College were incorporated in pursuance of the amendment of 1870 here mentioned.

affording the opportunity so long withheld, for Eclectic and other Reform physicians to establish incorporated institutions of their own. This view of the law, so plain and apparently unequivocal was sustained at that time by the ablest jurists and justices of the principal courts of the state.

Two societies, each bearing the name of the "Reformed Medical Association of Western New York," united in 1847, to establish a medical school at Fredonia in order to prepare students to enter the Eclectic Medical Institute at Cincinnati, Doctors Zoheth Freeman, Lorenzo E. Jones, John R. Bush and B. S. Heath were the instructors. The next year a college organization was effected under the new law, taking the name of "The Eclectic Medical Institute of New York." It held a term during the months of August and September, with Doctors Freeman, Jones, B. L. Hill and Orin Davis, as professors.*

Doctors Bush and Heath meanwhile opened another school of similar character at the village of Randolph. Doctors S. H. Potter, Charles J. Kenworthy and A. S. Davis were associated with them. The result convinced them that in order to assure permanent success for a medical institution, it must be at a more central location.

Dr. Potter had been a graduate of the college at Worthington. He was a man of sanguine temper, ambitious of superiority, and fond of notoriety. He quickly conceived the project of uniting the two enterprises. Making his residence at Syracuse, he began the publication of the *Eclectic Medical and*

* Among the students were several who afterward became distinguished in medical circles; as Doctors William W. Hadley, William H. Hawley, Jonathan Flattery and A. D. Skellenger.

Surgical Journal, and procured a certificate of incorporation for the "Central Medical College of New York." In order to give countenance to the enterprise and to assure to it future support, a convention was called at Syracuse, in 1849, which organized the "New York State Eclectic Medical Society."*

The new enterprise was greeted by the Reform physicians of Western New York with hearty enthusiasm. A faculty was created, composed of Doctors S. H. Potter, Orin Davis, John R. Bush, William W. Hadley, B. S. Heath and S. M. Davis.† Besides them, Dr. Wooster Beach delivered a course of lectures upon the Theory and Practice of Medicine, and Dr. S. O. Gleason upon the Water Cure, then a novelty in remedial procedures. There were ninety-four matriculants and an average of about fifty in steady attendance for a term of four months. Many of them were physicians in regular practice.

This college took the initiative in the admitting of women as students in medicine on equal terms with men. Elizabeth Blackwell had run the gauntlet before this, of applying and meeting refusal at the medical colleges of the dominant school. When, however, the Eclectic Medical Institute, at the instance of Dr. Joseph Rodes Buchanan, had accepted her application, the college at Geneva, in New York, consented to receive her; voting directly not to admit any other woman as a student. The Central Medical College at Syracuse now gave a hospitable

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* There were county societies in Oneida, Chenango, Orange, Oswego, Genesee, Livingston, Niagara and Chautauqua counties.

† After the death of Dr. Abiel Gardner, the Poughkeepsie *Thomsonian* was removed to Saratoga, and Dr. Davis became the editor. Very soon afterward its publication was suspended.

welcome to Mrs. Rebecca B. Gleason, Mrs. Lydia F. Fowler, Mrs. Charlotte Montgomery, Miss Fidelia Warren and Miss Taylor.

From this time onward the Eclectic colleges generally have cordially accepted women as students, and the Eclectic Medical Societies welcomed them as members.* The Homœopathic colleges and societies presently followed this example, and finding it popular, have begun to boast of having been first in the matter. The dominant school for many years permitted them to get on by themselves in "women's colleges," like Jews in the Ghettoes, separate and apart.

Western New York has always been foremost in enterprises conducing to human advancement, whether moral, social or religious. It was the birthplace of the Anti-masonic and Liberty parties, and it now abounds with liberal physicians.

It has been unfortunately the case that the administration and especially the financial management of medical colleges have been fruitful in jealousies. The Central Medical College was speedily an example of heartburnings and controversy. The trustees, at the end of the first session, in order to end the quarrel without scandal, determined to remove the institution to Rochester and there hold a spring term. The professors most blamed gave place to successors. Dr. Potter was succeeded by Dr.

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* The Eclectic Medical Institute excluded women in 1853, but consented to receive them a few years afterward; it again excluded them, but accepted them in 1877. The Eclectic College of Medicine at Cincinnati admitted them for a year or two and then shut the door. The Worcester Medical Institution received them till after the death of Dr. Calvin Newton, but at the instance of a Reform Medical Convention, excluded them in 1856. The later colleges, most of them, admit women.

Charles J. Kenworthy, late of the Eclectic Medical Institute at Petersburg, Dr. S. M. Davis by Dr. L. C. Dolley, and Dr. Link by A. K. Eaton. Besides these, Dr. Levi Reuben was made professor of physiology and Mrs. Lydia F. Fowler of obstetrics.

At that time the notion was entertained that a state medical society was part of the machinery of the medical college. Accordingly a meeting was called at Rochester, and resulted in a distinct organization.

Dr. Potter was prompt to resent the imputation conveyed by this action. He began a new medical journal and filed a certificate of incorporation for the Syracuse Medical College. He was president of the New York State Eclectic Medical Society, and had no difficulty in obtaining its sanction for the new institution. The Eclectics of Western New York were now in two parties and their controversy was conducted with rancor.

This state of conflict continued till the summer of 1852. Dr. Calvin Newton then became identified with the Eclectics and was elected president of the National Eclectic Medical Association. He proposed a union of the three colleges; a spring term to be held at Worcester and a winter term at Syracuse. This was accepted; the Central Medical College was dissolved, and the two Eclectic Medical Societies again united.

The new arrangement began with fair promise. Dr. Reuben became editor of the *Union Medical Journal;* and the Faculty was constituted at Syracuse of Doctors Reuben, Hadley and Eaton, from the Central Medical College, Doctors C. Newton and G. W. Morrow, from Worcester, and Doctors S. H. Potter, Joseph Brown and Dwight Russell, of Syracuse. The next summer,

however, the professors from Worcester and Rochester had resigned. Dr. Newton vouchsafed the simple figurative explanation: "When the walls of a building are constructed of such materials as to be liable to fall at any moment, it is wise for the inmates to guard themselves against being involved in the ruins."

Dr. Potter was able, nevertheless, to gather a new Faculty. Many of his colleagues were not only superior physicians and teachers, but afterward won distinction in other institutions. Among them were Doctors David Calkins, and William H. Burnham, Dr. William Paine, afterward dean and general manager of the Eclectic Medical College of Pennsylvania and the Philadelphia Medical University; Dr. A. R. Thomas, professor in the Eclectic Medical College and the dean of Hahnemann Medical College of Philadelphia; Dr. E. H. Stockwell, of the American Medical College of Ohio, and Vincent A. Baker, of the Eclectic Medical College of New York and the University of Florida.

The failure of the experiment of 1852, however, inflicted a shock from which the institution never recovered. There was no basis of support for the enterprise except from the fees for tuition. If the men engaged in teaching had been led by plausible and flattering utterances to hope for adequate remuneration for their services, they had been disappointed. Promises not verified by the results were certain to be followed by coolness and disgust. Hence there were frequent changes in the instructors, and many who felt that their confidence and enthusiasm had been abused, became unfriendly.

At this period Dr. Potter found an opportunity to enter a new field of labor. The American Medical

College had been established in Cincinnati, by Doctors Baldridge and L. E. Jones, and he was invited to become one of the new Faculty. By this time he had few attractions to detain him in the east, and accordingly in the autumn of 1855, removed to his new home. The Syracuse Medical College which he had called into existence passed immediately from the stage.

The New York State Eclectic Medical Society continued a few years longer. Many of its members sustained an excellent reputation as physicians and citizens; and its officers, such as Lyman Stanton, Vincent A. Baker, A. P. Hale, George D. Kughler, Henry C. Gazlay, James N. Betts, were an honor to the medical profession. There was, however, no longer a focus or nucleus for Eclectic medicine in Western New York, where it had been most flourishing, and the members formed other relations.

SOCIETIES IN NEW YORK AND BROOKLYN.

After the Botanic Association of the State of New York had taken the new name of Physo-Medical, it adopted the usual somewhat trite resolutions asking the practitioners subscribing to its principles to form local societies. The old Thomsonian organizations had gone out of existence, and there was a desire to get rid of that designation. Several societies were thus established.

One of these was formed at the office of Dr. Hermes M. Sweet, in the city of New York, in 1849, by the name of the "New York Eclectic Medical Society." Dr. Sweet himself was the Secretary, and remained in office as long as meetings were held.

The "American Medical Association" was also organized on the western side of the city of New York, in 1849. The late Dr. Elijah Whitney was prominent in the meetings; also, Dr. Van Doren, Dr. Atkinson, and afterward, Dr. Wooster Beach himself. The Society was incorporated under the law of 1848.

The Eclectic Medical Society of Brooklyn was also formed in 1849, by Doctors Dennis E. Smith, P. S. Lapham, Grover Coe, and others. Five years later it filed a certificate of incorporation under the title of "the Eclectic Medical Society of the County of Kings," and in 1861 it took the name by which it has since been known, of "the Brooklyn Academy of Medicine." For many years, till the death of its principal members, it was one of the most effective medical societies in the State.

The "New York Medical and Pathological Society" began its operations in 1856. It was hardly a partisan body, but included physicians of the various schools of practice who were willing to forego the rancor of party and meet with their peers on a common footing as friends and gentlemen. After a while the New York Eclectic Medical Society and the American Medical Association dropped their organizations, and the members generally affiliated with this Society. The *Journal of Medical Reform*, published to sustain the interests of the Metropolitan College, being suspended in 1858, a Committee was appointed by the Society to publish the New York *Medical and Pathological Journal* in its place, with Dr. W. W. Hadley for Editor. The arrangement continued till midsummer, when dissensions arose in the College, and the Faculty established a rival publication, the *Journal of Health*. The virulent controversies which ensued

speedily terminated the existence both of journal and Society.

NATIONAL COLLEGE OF PHYSICIANS AND SURGEONS.

After the failure to effect a satisfactory combination of the friends of the two colleges, at Syracuse and Rochester, the attempt was made to establish an Eclectic School in the city of New York. The law of 1848, under which they had been incorporated, it was apprehended, was not sufficiently comprehensive to confer the full rights and powers of an institution for the instructing and graduating of medical students. Accordingly, a bill was prepared and introduced, with petitions, into the House of Assembly, in 1853, to incorporate the "National College of Physicians and Surgeons." The Committee to which it was referred, having been constituted of persons hostile to the new school of practice, made an adverse report.

As in the days of stalwart Thomsonianism, a vigorous debate followed. Gen. Silas M. Burroughs, of Orleans, sternly reprehended the partisan action of the Committee. He had yet to learn, he declared, that a new system was not to be permitted in the profession of Medicine as well as in the profession of law. The petitioners for this bill were worthy citizens, he affirmed, and as such had a perfect right to an act of incorporation. If the Committee sincerely desired to do away with quacks, the true way was to permit the forming of institutions at which to educate practitioners.

These views, in their general tone, were in perfect accord with the prevailing sentiment of that period, in favor of large liberty to private enterprise. The Assembly promptly laid the report of the Committee

upon the table. Its purpose, however, was afterward secured by indirection. A General Law was enacted at the same session of the legislature, which conferred on the Board of Regents of the University full powers to incorporate educational institutions, but made it the imperative condition, in the case of a medical or surgical college, that the sum of Fifty Thousand Dollars should be subscribed for its endowment, and at least two-thirds of this amount paid in and invested "to the satisfaction of the Board." The law in this case was apparently mandatory, declaring that in such case a charter must be granted. Subsequent experience has abundantly shown that the law had been adroitly worded, as if to meet the convenience of a Circumlocution Office. It has actually served ever since as a pretext for refusing charters to all medical institutions that are not approved by the American Medical Association.*

THE "REFORM" MOVEMENT.

In 1851, the various National organizations of Medical Reformers showed signs of weakness, it they had not passed out of existence outright. The United States Thomsonian Society and the "Independent" had both ceased to meet. The National Eclectic

* Dr. Levi Reuben, a man of charming probity and simplicity, smarting at this time from his unfortunate experience with the Syracuse Medical College, was among those who were misled by the artful verbiage of this law. "It promised," he declared, "to be beneficial in the way of putting a quietus on 'fungous organizations,' and through a chartered college of the first grade, of raising the Reformed profession to a deserved rank among its competitors." He supposed the law to be mandatory, and confidently predicted the successful founding of the proposed College upon the basis required. The hope, it is unnecessary to add, was never realized. It was intended by the individuals who drew the bill to exclude all colleges except those of the favored school. In 1883, the friends of the United States Medical College having obtained $55,000, applied to the Regents for a charter, and it was refused upon the pretext here afforded.

Medical Association showed signs of precarious condition. It seemed as if the field was now open to a new enterprise.

Accordingly, under the auspices of the New York Eclectic Medical Society, a Convention of Physopathic, Eclectic and other Reform physicians, willing to unite and act together, was invited to assemble in the city of New York, on the twenty-third day of September. In response to the invitation, a large number of practitioners of the several Schools attended from the Eastern, Middle and Southern States.* Dr. H. F. Gardner, of Connecticut, was elected president, and Dr. Joseph D. Friend, secretary.

The Convention remained in session two days. It adopted a platform declaring it a leading principle in Medicine to reject all methods tending to impair the vital powers, in which category "the mercurial, antimonial and blood letting system of treatment" was included and pronounced "unscientific and obsolete."

The Convention further voted to be "known and recognized by the name of Reform Medical Physicians, renouncing all former distinctive appellations, to unite on the foregoing platform of principles, and to extend the hand of professional fellowship to all Medical Reformers whose principles accord therewith."

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* Among others were Dr. J. Myers, a Botanic physician from Louisiana Doctors W. F. Smith and A. R. Doren, of the Middle States Reformed Medical Society; Doctors Isaac J. Sperry and B. F. Sperry of the Connecticut Botanico-Medical Society; Doctors Samuel Tuthill, William Jones, A. W. Russell, Isaac M. Comings, John Law of the Physo-Medical Society of New York; William Elmer, D. E. Smith, H. C. Firth, B. J. Stow and George Newby, Eclectics; Doctors John Kent, of Ohio, Charles Green, of Philadelphia, Henry Hollembaek, of New Jersey, and others sent letters expressing their concurrence with the purpose of the meeting.

From this time onward, the adjective designation of "Reform" began to supersede the other titles which had been adopted at different periods by the societies of the Independent Thomsonian School. In Ohio and several other states the older name of Physio-Medical was retained, but in the South and East, the new title was adopted.

A Committee had been appointed* which issued an invitation for a United States Convention to meet at Philadelphia, in January, 1852, "for the purpose of adopting measures to secure the united and harmonious coöperation of all the friends of Medical Reform."

The Convention at Baltimore, following in the same direction, formulated a platform adopting the tenet of sanative medication, and the rejection of all depleting agents and procedures, and proclaiming the theory of disease in these terms.

"Disease is not vital action deranged or obstructed, increased or diminished, but any condition of the organs in which they are not able to perform their natural functions; a condition that permanently deranges, obstructs or diminishes vital action—and in this sense disease is a unit."

"Reform" Medical Societies were formed in many of the states—in Maine, Kentucky, Tennessee and several others. The Physo-Medical Society of New York, and the Eclectic Medical Association of Connecticut, adopted the designation; and in 1856, the Southern Botanico-Medical College of Macon, changed its name to that of "Reform Medical College." A Southern Reform Medical Association was also organized, embracing in its jurisdiction the Southern

* Doctors Isaac J. Sperry, William Elmer and Joseph D. Friend.

and Southwestern states. The prevailing temper of Eastern, and to a great degree of Southern Reformers, was now in favor of a general union of the different parties. The National Eclectic Medical Association came into harmony with the same sentiment. Unfortunately, the Botanic and Eclectic Schools of the Northwest were divided, and every faction was intensely hostile to all the others, and unwilling to harmonize on any terms short of a total yielding of every matter of distinction.

Under these untoward conditions, it is not wonderful that the United States Reform Convention ceased to be held, and that the National Eclectic Medical Association also ceased to exist.

The Southern Reform Medical Association, however, held regularly its annual meetings. When in session at Atlanta, in May, 1856, it adopted the Baltimore platform provisionally as its exposition of principles. Present at this session was Dr. Jerome Cochrane, a graduate of the Botanico-Medical College at Memphis, and then a practitioner at Grenada, in Mississippi. He took violent exceptions to the definition of diseases set forth, using language so discourteous that Dr. Bankston, the president, took notice of the matter, and a vote of disapproval was passed. Dr. Cochrane, unwilling to yield peaceably, attacked the platform in the *Memphis Journal of Medicine*, making a very conspicuous exhibition of sciolism.*

* To the proposition defining disease, Dr. Cochrane offered the following as a rebuttal:

"Vital action, it is true, cannot under any conceivable circumstances, be identified with disease. It is also true, therefore, that vital action deranged, or vital action obstructed, or vital action increased, is not disease. But any derangement of vital action, whether it be of obstruction, or of augmentation, or of diminution, is disease, and nothing but disease."

Dr. W. H. Cook, of the *Physio-Medical Recorder*, thus remarked upon this

The Association held its next meeting at Memphis, in March, 1857. The members in attendance were from Virginia, Georgia, Alabama, Mississippi, Arkansas, Tennessee, and Kentucky. Dr. Bankston was again elected president and Dr. I. N. Wilson secretary.* The proceedings were unusually important, and in the light of subsequent history, very significant.

One resolution declared the project of a *National* Reform Medical Association impracticable at the present time, but urged that there should be "a thorough and efficient organization and maintenance of *State Associations*, and that each send delegates to the *Southern* Association—thus constituting a great centre around which, in harmony and in order, its subordinate organizations shall long continue to revolve."

A system of delegation was accordingly devised, and a representation prescribed of two to five from each State, and two from each medical college in the Association.

The platform was again referred to a Committee. Under the expectation that it could be materially changed in terms, a resolution was adopted that any person dissenting from any of the minor points might be considered a candidate for membership. The

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article of Dr. Cochrane: "Every proposition of the platform is contorted from its real meaning, and this contortion then treated as a reality. All the arguments he uses are mere assertions, unfounded in fact, and not upheld by one single truth or principle in nature."

Certainly as a literary production, the criticism was vulgar, ill-bred and ungrammatical in expression, and like the emanation of an irritated, unschooled fault-finder.

* Among them were Doctors L. D. Skelton, W. Slaughter, J. R. Thornton, S. J. Austin; also, Drs. I. M. Comings, R. C. Bryan, I. N. Wilson and L. Bankston, of the Reform Medical College of Georgia; and Doctors Hugh Quin, R. H. Harrison, T. C. Gayle, W. B. Morrow, G. W. Morrow and L. P. Cutler, of the Botanico-Medical College of Memphis.

name of Dr. Jerome Cochrane was accordingly proposed, and he became a member.*

The Southern Reform Medical Association continued in operation till hostilities broke out between the South and North. An effect of the war was to extinguish the rivalship and animosity between the several schools. After the restoration of peace, the trend of sentiment was distinctly toward affiliation with the Eclectic School of Practice. The College of Macon was organized anew on that foundation, but the Botanico-Medical College of Memphis was not again opened. Eclectic Medical Societies, in which the Botanic and Reform physicians took active part, were formed in Georgia, Alabama, Tennessee, Kentucky, Arkansas and Texas, to represent and carry on the American Reformed School of Medical Practice in the South.

THE MEDICAL COLLEGE OF PHILADELPHIA.

There had been no abandonment of purpose by the Eclectics of Philadelphia and that vicinity, because of the failure of the project of Dr. Morrow for a National Organization and a Medical Institution under its charge. They adopted the plan in vogue at the time, and organized the "Middle States Reformed Medical

* Dr. Cochrane soon afterward left the Reform ranks. He procured the degree of Doctor of Medicine in 1861 from the Medical Department of the University of Nashville, and ever since that he has been a relentless and implacable adversary of physicians of the school which he had abandoned. The changes of the times have made him a resident and Health Officer of Alabama. A medical law having been enacted in that State, and curiously modified to give virtually almost absolute power to the Health Officer over medical practitioners, he was prompt and active to employ the opportunity which it afforded him against Eclectic and other non-orthodox physicians. The Supreme Court of Alabama, however, proved more just in their behalf than the Medical Board.

Society." Its members were resident in New Jersey, Delaware, Virginia, Maryland and Pennsylvania. Many of them belonged in the higher social circles.* The purpose of the organization was the establishing of a Medical College. The Society held its meetings in Philadelphia, and was a powerful factor for the maintaining of the Eclectic cause.

In 1850, Doctors Thomas Cooke, Joseph Sites, and P. F. Sweet, acting under its authority, repaired to Harrisburg, at the meeting of the General Assembly of the State, and obtained from that body an act incorporating the Eclectic Medical College of Pennsylvania, with full power to instruct students in Medicine, and to confer the degree of "Doctor of Eclectic Medicine." The Trustees of the new institution proceeded directly to appoint and install a Faculty.† The first term was held in the spring of 1851, after which the institution was carried on for years with moderate encouragement, and making little of the usual boasting about financial prosperity.

An angry controversy arose with Dr. W. F. Smith, and the Middle States Reformed Medical Society took part with him. The matter was carried to the National Eclectic Medical Association, which met that year at Pittsburg. It was laid over to the next

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* Of the number were the Hon. John S. Prettyman, afterward Consul to Glasgow; Dr. John Rose, of Baltimore, the president; Dr. A. C. Haines, Dr. Persius F. Sweet, Dr. William F. Smith, Dr. J. M. Ross, Dr. Palemon John and in later years, Doctors Marshall Calkins, William Paine, Henry Hollembaek, Joseph Sites, L. H. Borden. The regulations were very rigid. Attendance at meetings was required and a member advocating any other system of Medical practice as superior to the Eclectic, or employing any other practitioner in his family than an Eclectic, was liable to expulsion.

† The professors consisted of Dr. Stephen H. Potter, late of the Central Medical College of New York, Doctors Thomas Cooke, Henry Hollembaek, Thomas J. Chase, Joseph Sites, and St. John H. Mintzer.

meeting at Rochester. Doctors Cooke and Sites were there present to defend their action, and the complaint was dismissed.

The Medical Society, however, did not concur in this disposition of the matter. In 1853, Mr. J. S. Fisher and the other members procured from the General Assembly a charter for the "American College of Medicine." The National Association held its annual meeting that year at Philadelphia, and took action in favor of a representative system in its future membership, a more thorough system of medical instruction, and against the establishing of medical colleges with insufficient means of support.

Soon afterward, the misunderstanding between the College and the Middle States Reformed Medical Society was satisfactorily adjusted, and the new institution did not go into operation.

The death of Dr. Thomas Cooke took place in 1855. He had begun the Eclectic movement in Philadelphia and enlisted the Botanic physicians in its support. Awake to the importance of more thorough education, he had labored with untiring assiduity for that purpose, and the Eclectic College of Pennsylvania was the result of his persevering endeavor. In his efforts for its success he had been diligent and faithful. His death following upon that of Calvin Newton, left the Eclectic cause in the East deprived of its two most efficient supporters.

It was necessary to appoint new professors to the vacant chairs in the College. Dr. John Fondey succeeded Dr. Cooke as dean of the Faculty, and Dr. James M. Buzzell, of Maine, was elected professor of surgery. Dr. Marshall Calkins, late of the Worcester Medical Institution, was appointed to the chair of

Anatomy and Physiology. He was at that time a zealous Eclectic and had won honorable distinction for scholarship and for his share in the work of Dr. Calvin Newton, on *Thoracic Diseases.*

Dr. William Paine also received the appointment of Demonstrator of Anatomy. He was a graduate of the Berkshire Medical College, and had few superiors as a physician or as an instructor. He was plausible and attractive in manner, ambitious, and endowed in a liberal degree with the qualities that persuade and control. His executive ability was seldom surpassed. He was not long in obtaining an appointment to the professorship of Theory and Practice of Medicine, and a leading influence in the management of the College.

Under the new arrangement, the institution entered upon a more prosperous career, and bid fair to win and hold a high place in public favor. There was not, at that time, any of the Reform Colleges superior to it in efficient administration, or in the quality of its instruction.*

The relations between the College and the Middle States Reformed Medical Society had grown closer and for the time more cordial. The professors of the College became members of the Society, and Dr. Calkins was elected secretary. Doctors Palemon John and J. S. Prettyman published the *Middle States Medical Reformer* for four years. In 1855 they merged

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* The graduates that year outnumbered those of any other Medical College in Philadelphia. Among them were several who became conspicuous in later years as teachers and contributors to medical literature. Doctors I. J. M. Goss, James M. Hole, Robert Hamilton, John G. Rich, Horatio G. Newton, M. D., nephew of Dr. Calvin Newton, and John Buchanan, were of the number. Dr. George W. Brown, of Kansas fame, now of Rockford, Illinois, was also from this institution.

the publication into the *Eclectic Medical Journal*, which Doctors Paine and Calkins had just begun. The Society also adopted a new constitution, taking the name of the "American Eclectic Medical Association of Philadelphia." It continued as before to hold stated monthly meetings for many years.

The College was removed, in 1858, to more commodious headquarters at the "Friends' Literary Institute," at the corner of Sixth and Callowhill streets. Every thing now appeared auspicious for the enterprise. The graduates generally became excellent practitioners, whose professional services were characterized by less mortality than had been the rule in the old procedures, and by the more perfect recovery of their patients. The career of the College was generally esteemed to be honorable alike to the teachers, the students, and to the Eclectic School of Medicine. The standard of instruction, and what was more significant, the actual requirements for graduating, were higher than in other medical colleges. Philadelphia bade fair at this period to become a centre for Eclectic medicine, as it had been for the dominant orthodox school.

The Penn Medical College was established by Dr. Joseph S. Longshore and his associates, in 1853. They had been connected with the Woman's Medical College, but had withdrawn on account of the stringent medical partisanship which had been established and enforced in that institution. Dr. Longshore was an able physician, scholarly, sincere in his convictions, liberal in sentiment and strictly conscientious. He was the author of a work on Obstetrics of great merit. It is not superfluous to add that the new institution was organized on a

liberal basis, without proscription or partisan requirements, and was open to students without distinction of ethics, color, etc.*

* This matter of educating young men and women in the same classes and institutions has been the theme of much absurd questioning and vulgar expression. Some years ago a professor in the St. Lawrence University was asked by an English woman as to what form of discipline the school adopted when men and women were allowed to study together: "The college has no rules, madam," he replied, "the young women don't require any, and they discipline the young men with their very presence. We really have nothing to do about it."

CHAPTER XIII.

MEDICAL COLLEGES AND CONTROVERSIES.

It is neither an easy task nor a desirable one to recapitulate the history of altercations. The acrimony displayed, the misrepresentations, the aspersion of motives, and often the coarse, not to say indecent vituperation, exhibit the parties in a most unfavorable light, besides making the actual facts very difficult to distinguish. Such quarrels are most frequent and implacable in families, sparsely-settled neighborhoods, and circumscribed groups of individuals, whether in a religious, benevolent or medical society not having many members. In the cases where there is the closest similarity in opinions or doctrine, but coming a little short of entire agreement, the discord is usually the fiercest. The early Thomsonians and Reformed physicians, we have already observed, entertained an unappeasable dislike for one another, and in subsequent years there were analogous spites and mean jealousies, often very absurd and ridiculous, between individuals of the Eclectic School. "The earth cannot bear two suns," replied Alexander to Dareios, "nor Asia two kings." So in the humbler world, the love of ruling which is the root of every form of evil, and with it a vicious disposition to neglect the requirements of fraternal courtesy, and even of common justice, doubtless underlay the whole. The cause of Reformed Medicine has suffered worse from causes of this character,

at certain periods of its history, than from the persecutions of its open adversaries.

MEMPHIS INSTITUTE.

At the session of the Legislature in Tennessee, in 1847, an act was passed to incorporate a university by the title of "The Memphis Institute." The late Dr. William Byrd Powell had the chief agency in procuring the enactment. Dr. Powell was a graduate of Transylvania University of Kentucky, and had become deeply interested in promulgating certain novel doctrines in regard to Cerebral Physiology and the Human Temperaments.* Not having the opportunities which he desired at the Botanico-Medical College of Memphis, he sought to establish an institution with a broader foundation which would afford him the coveted opportunity. He was engaged for two years with the necessary arrangements for the literary and scientific departments, after which he proceeded to the organizing of an Eclectic Medical College. The Faculty consisted of Dr. Powell, himself, Dr. Robert S. Newton, Dr. Zoheth Freeman, and Dr. J. Milton Sanders. There was a partial endowment of the Institution and it was enabled thereby to continue in active operation for two years.

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* Dr. Powell maintained that the temperaments commonly designated "sanguine" and "bilious" are *vital*, and those denominated "nervous" and "lymphatic," are *non-vital*. He assumed further that the latter two were not primitive, but developed by conditions of civilized life. From these premises he deduced the theory that connubial unions between individuals of like temperament, or with a predominance of "non-vital" temperaments, are physiologically incestuous, and certain to be either unprolific, or productive of a degenerate offspring, that will be scrofulous, imbecile, mal-formed, or short-lived. The theory has been embraced by many in this country, so far as it relates to conjugal relations between persons of kindred blood, but it has received little countenance otherwise, except among specialists upon the subject of heredity.

TROUBLES AT CINCINNATI.

At this period the Eclectic Medical Institute at Cincinnati had become involved in a chaos of troubles. A Chair of Homœopathy had been established in 1849, and Doctors Baldridge and Oliver resigned from the Faculty. Their places were supplied by Doctors H. F. Gatchell and Storm Rosa, both of them Homœopathists, giving a color of probability to the apprehension that the trend was toward a diverting of the enterprise from its original purpose as an Eclectic school. It was actually asserted afterward that the purpose existed to displace Dr. Morrow himself. On his own part, Dr. Buchanan himself declared that the utmost harmony existed between them, and that Doctors Morrow and B. L. Hill, acting against his judgment, were the persons that were most forward to establish the Chair of Homœopathy.

He also stated that in becoming a member of the Faculty, he had, for the time, abandoned his favorite investigations in anthropologic science, and that he had been placed in a false light by thus appearing as a representative of practical Medicine, instead of as the teacher of a New Philosophy. Whatever were the actual facts in this matter, it was inevitable that he and his associates should come into direct antagonism.

At this juncture, unfortunately for the College as well as for the Eclectic cause, Dr. Morrow died. The Trustees lost no time in abolishing the Chair of Homœopathy, and appointed Dr. I. G. Jones professor of the Theory and Practice of Medicine. The Institute was found to be involved in most perplexing financial embarrassment. None of the professors

possessed aptitude for business except Dr. L. E. Jones, and for him, Dr. Buchanan, now dean of the Faculty, entertained an inveterate dislike. A union with the Memphis Institute was proposed as a remedy. Dr. B. L. Hill, Dr. I. G. Jones and Mrs. Morrow, whose means of support were largely imperilled by the woful condition of things, wrote letters to Dr. R. S. Newton, in January, 1851, entreating him to come to Cincinnati, and help rescue the School. He consented, and the Memphis Institute was abandoned. Dr. Hill, having become a Homœopathist, retired, and also Dr. Gatchell. Doctors Freeman, Sanders and King became members of the new Faculty; Dr. Powell absolutely refusing an appointment.

THE AMERICAN REFORM MEDICAL INSTITUTE.

In 1849, the Legislature of Kentucky enacted the bill to incorporate the "American Reform Medical Institute." Dr. A. H. Baldridge, late of the Eclectic Medical Institute at Cincinnati, was active in its organization. The enterprise appeared for a time to be in the way of receiving a generous support. There was considerable dissatisfaction existing in regard to matters at the school in Cincinnati. This operated in favor of the college at Louisville, and sanguine hopes were entertained that it would become the principal medical school of the Southwestern States. Great diligence had been employed in the selecting of instructors. The Faculty comprised several of the most prominent Eclectic and Botanic physicians. Dr. Baldridge was the dean during the first term, in 1850, but was succeeded the next year by

Johnson H. Jordan.* Their associate professors were Doctors E. Morgan Parritt and George W. Churchill, from the Worcester Medical Institution ; Dr. Charles J. Childs and Dr. James Milot. Several terms were held with excellent promise, when unfortunate occurrences brought the career of the institution to a sudden close.

FREE LECTURES AT CINCINNATI.

Dr. I. G. Jones had succeeded to the professorship held by Dr. Morrow. He employed the opportunity to complete the work on the Eclectic Practice of Medicine which Dr. Morrow had left unfinished, and to add to it a volume entirely of his own preparing. His health giving way, he was obliged to stop lecturing, and his death took place a few years afterward.

Dr. Wooster Beach was unacceptable to the new management, and his name was removed from the Faculty.

The project had been conceived of making the stated lectures free. It was in accordance with the Free-School movement, then at its height, the dean argued. It was also the practice at the *Ecole de Médecine* of Paris, and attracted students thither from all

* Dr. Jordan graduated at the Eclectic Medical Institute in 1848. While he was at Cincinnati the next spring, contemplating a removal to New York, to take part in the Central Medical College, the cholera broke out. Most who were stricken died. The common treatment was ineffectual, not to say fatal outright. At the popular demand the Board of Health placed Dr. Jordan in charge of the cholera hospital, where he remained from the sixth of June till the twenty-eighth of August. His success had not been equalled in any but the Eclectic, Thomsonian or Homœopathic practice. He had 210 patients with cholera, of whom 49 died. Of these last, 39 were moribund when they were brought to the hospital. Dr. Jordan then accepted the invitation to take part in the enterprise at Louisville. He was dean for one year, and editor of the *Medical Era*. He spent the last years of his life at Chicago, dying in 1885.

directions. He was confident that a like result would follow at Cincinnati. The purpose and expectation were also cherished that it might compel the other Reform Colleges to suspend, and so leave the Eclectic Medical Institute in exclusive possession of the field, thus virtually constituting it the umpire of the entire Eclectic School of Medicine in the United States. The professors were assured that by this policy the number of students would exceed five hundred, and that they would thus obtain a larger income from the other fees sufficient to recoup them for the loss of receipts for lectures. There would also be a larger sale of the books which the professors had published. Besides, they had the resource of private classes apart from their regular duties. This has been a common matter in medical colleges of every school of practice. Students anxious to make sure of graduating with facility are naturally awake to the importance of making friends in the Faculty, and so will consent to pay for such tuition, as though it did not properly pertain to the regular course of study. The professors were thus induced to believe that the larger number of students thus obtained by the attraction of free education in medicine, would in this way be induced to contribute enough to make it a profitable operation. Doctors Freeman and Sanders, however, did not approve of the arrangement, and resigned their Professorships. The vacant chairs were filled by Doctors G. W. L. Bickley, J. W. Hoyt and W. Sherwood.

In the latter weeks of 1852, the ill feeling which had long existed between Dr. Buchanan and Dr. L. E. Jones had reached its crisis. There had been much dissatisfaction in the class with several of the new professors, and Dr. Jones had imprudently taken sides

in the matter. He also expressed his sentiments about Dr. Buchanan with great indiscretion. The latter brought the matter before the Board of Trustees, and upon his representations a resolution was unanimously adopted expelling Dr. Jones from the Faculty.* Dr. Newton was elected his successor, and Dr. Freeman accepted the post of Professor of Surgery.

The plan of free lectures met with indifferent success.† It failed to induce students to attend in any considerable number from the Eastern States, while at the same time it was regarded by the managers of the other Reform Colleges as an unfriendly action, and several medical journals expressed their disapproval in no equivocal terms. After two or three years, the former mode of procedure was restored.

Among the graduates of this period may be enumer-

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* This controversy was characterized by a vast deal of scandal. Dr. Bickley, who afterward changed his attitude in the later dissensions, declared that "the basis of this matter was of a private character," and that Dr. Buchanan made various charges with such apparent sincerity that the Faculty were deceived, and refused Dr. Jones an opportunity to exculpate himself or to impeach the testimony. Dr. Buchanan, on his part, accused Dr. Jones of moral depravity and unfitness, and described his accusations as "the stupid mendacity of a selfish and animal nature impelled by ungovernable passion." He affirmed that Dr. Jones was too illiterate and ignorant to write a paper suitable for the public eye, and that another member of the Faculty actually wrote the greater part of the treatise on Materia Medica, to which Dr. Jones prefixed his own name as author. Dr. Jones made a reply containing the severest allegations of all; that Dr. Buchanan had never been an Eclectic; that he had traduced Dr. Morrow, saying that the prosperity of the college required his removal, and his place to be filled by a more competent teacher; and that Dr. Morrow himself, in a letter written a few months before his death, had declared Dr. Buchanan to be unstable and visionary, and that "his vagaries and hypothetical doctrines tend to mystify and blind the minds of students, and make them anything but practical men."

† A similar experiment was made at the medical department of the State University of Michigan. It was confidently supposed that free tuition would attract students from all parts of the country, and enable the school to cast into the shade the other schools, even those of Philadelphia. Enthusiastic persons even predicted that there would be an annual revenue of $300,000 to the Treasury of the State from this source. The expectation, however, was not realized.

ated many who were afterward well known. We can name in the number, James Anton, James M. Youatt, John F. Judge, Henry Wohlgemuth, W. C. E. Martin, Robert W. Geddes, Andrew Yeagley, Lemon T. Beam, Edwin Freeman.

THE AMERICAN MEDICAL COLLEGE OF OHIO.

The summary action taken in the case of Dr. L. E. Jones was followed, as in analogous instances, by the founding of the "American Medical College." Doctors Jones and Baldridge were foremost in the undertaking, and their former friendly relations with Dr. Morrow enabled them to enlist many of his friends in its behalf. Dr. Jones made a journey to New York in quest of lecturers, but with little success. A Faculty, however, was finally obtained, and the institution went into operation with much energy. Following the example of the other Eclectic Colleges, there were two terms held every year, and the attendance was encouraging. The professors were men of ability, and most of them had already served elsewhere as instructors.* In the autumn of 1855, Dr. S. H. Potter gave up the Syracuse Medical College, and removed to Cincinnati with his journal, making it the mouthpiece of the Faculty.

Thus early, however, the apple of discord was hurled into the midst. It had often been accused and denied, that Eclectic practitioners adhered to the use of mercury and other discarded remedies. It was said that while as a school they professed to entertain radical and advanced sentiments upon this subject,

* The Faculty comprised in its corps of instructors Dr. T. J. Wright, the dean, Doctors L. E. Jones and A. H. Baldridge, late of the Eclectic Medical Institute; Doctors S. H. Potter and E. H. Stockwell, from the Syracuse Medical College, and Doctors W. B. Witt, J. L. Galloway and F. D. Hill.

many of their teachers and others were hypocrites in this matter, and adhered to the old methods. Dr. L. E. Jones was earnest in his hostility to these procedures. He found his colleagues to be less sincere. The announcement of the College had been carefully worded in order to evade the entire proposition, and several of the professors had distinctly asserted that the institution represented no sentiments other than those of the Old School.

Dr. Jones felt that he could consistently remain no longer a professor. He and Dr. Baldridge, he declared, had virtually founded the American Medical College, and had been mistreated and defrauded by the dean.* The personal reflections were very severe and, of course, resulted in the vacating of their places in the Faculty. Dr. John Kost, formerly of the Cleveland Botanico-Medical College and of the Worcester Medical Institution, succeeded to the Chair of Botany, and Dr. John A. Corey to that of the Theory and Practice of Medicine.

The American Medical College continued in active operation till 1857. The Eclectic College of Medicine having come into existence, it then suspended and its good will and scientific apparatus were transferred to the new institution.

NATIONAL ECLECTIC MEDICAL ASSOCIATION,—CONTINUED.

The annual meeting of the National Eclectic Medical Association for 1851, had been appointed at

* Dr. Child had commanded the janitor to exclude them both from the building where lectures were delivered. Dr. Jones further alleged that the dean had divided the money received from the students, not paying him or Dr. Baldridge a cent; and he also instanced Doctors Potter and Stockwell as having participated in similar operations.

Pittsburg on the thirteenth day of May. Dr. Buchanan was the president, but did not attend. The absence of the several officers and other circumstances created serious misgiving in regard to the validity of the proceedings. An organization was effected, however, with Dr. Robert S. Newton, of Ohio, as president, and Dr. S. Kyle, of Pittsburg, as secretary. The number present was not large, and was chiefly composed of physicians from Ohio, Western New York and Pennsylvania. Dr. William Paine, of Warren, in Ohio, and Dr. L. Oldshue, the pioneer Eclectic of Western Pennsylvania, were among the number that enrolled themselves as members.

At this time the controversies between Dr. W. F. Smith and the Eclectic Medical College of Pennsylvania, and between the Central Medical College of New York and the Syracuse Medical College were at their height. The respondents in both cases were absent, and, as frequently happens, the accusers took advantage of that fact to bring the matters before the Association for its action. This, however, was prudently deferred till the next meeting.

It sometimes occurs in republican governments, that a new administration devotes much of its energies to undoing the work of its predecessor. It is not a wise procedure, nor often creditable, but personal ill will or partisan feeling makes it seem just to superficial observers. Dr. Morrow had made it his aim for years to effect a union and alliance of the Reform physicians of every change of sentiment.*

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* A letter purporting to be written by him bearing the date of February 8, 1850, has this sentence: "I intend to try to compromise with our 'Physopathic' friends, as you suggest, for the good of the cause." See also his letter to Dr. Thomas Cooke.

With this purpose, Dr. Buchanan had little sympathy He sent a letter to the meeting at Pittsburg, recommending that the attempt at a National organization be abandoned, and that local conventions be held instead. This proposition, however, was voted down, and the next meeting of the Association was appointed at the city of Rochester, in New York. The threatened dissolution was thus obviated.

The Third Annual Meeting of the Association was held pursuant to appointment on the eleventh and twelfth days of May, 1852. The members in attendance were principally from Canada, and the Eastern and Middle States. An increasing approximation of sentiment and fraternal feeling was apparent. It comprised, among others, the men who had been the first to adopt the designation of *Eclectic*. Dr. Calvin Newton,* of Massachusetts, was elected president; Doctors John Simms, of Delaware, and A. D. Skellenger, of Ohio, vice-presidents; Doctors S. H. Potter and L. C. Dolley, both of New York, secretaries.

The session was devoted to legitimate business. The complaint of Dr. W. F. Smith against the College in Philadelphia was dismissed, and the proceedings in regard to the Syracuse Medical College expunged from the record.

The endeavor was made at this meeting to give the Eclectic Theory of Medicine a definite scientific, as

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* "We went to the meeting," said Dr. Newton, "prepared to act the part of lookers on; * * but on the other hand we were prepared to lay aside all overstrenuous regard to names, and enter heartily into a coöperation, if we should find a disposition to union, together with sufficiently elevated and correct views of the Science of Medicine. We did find a controlling and an overwhelming majority thoroughly indoctrinated in the leading medical truths which we in New England entertain."

well as practical basis. Before this, most of the teachers and others who were prominent in the School, were men little versed in classic and general literature, and many were hardly redeemed from actual illiteracy. The new president was liberally educated and had been for several years an instructor in colleges. When he engaged in the profession of Medicine, he likewise began the effort to place it and the School which he had adopted, upon a basis of equality with other professions in point of general and other scholarship. As has been already set forth, he had never been specifically a disciple of Samuel Thomson or Wooster Beach, but at the very outset had declared himself independent, and an Eclectic, as he defined that term.

A platform of principles was reported by Dr. L. C. Dolley, a man of somewhat similar mould. It declared as the first proposition "to maintain the utmost freedom of thought and investigation, in opposition to the restrictive system heretofore in vogue. The other theses were explanatory of Eclecticism in Medicine, its scope and aims.

2. To encourage the cultivation of Medical Science in a liberal spirit, especially in the development of the resources of the vegetable Materia Medica, and the safest, speediest and most efficient methods of treating disease.

3. To adopt in investigations the Baconian or inductive philosophy, instead of the synthetic methods.

4. That a departure from the healthy condition interrupts the bodily functions, and only the recuperative efforts of Nature can effect their restoration. The object, therefore, of medication accordingly is to afford to Nature the means of doing this work more advantageously, and under circumstances in which she would otherwise fail.

5. "To receive and teach Eclecticism—not as an indiscriminate selection of means supposed to be remedial, but a selection based upon the recognized nature of the disease to be treated, and the character of the agent or agents employed to remove that disease, thus presupposing a knowledge on the part of the physician, at once of the pathology of the disease and the adaptedness of the remedy; and to encourage and urge the highest scientific attainments."

6. The excluding of all permanently depressing and disorganizing agencies—such as depletion by the lancet, and medication of a dangerous tendency; also a preferring of vegetable remedies, but no exclusive system of Herbalism—and no rejection of a mineral agent, except from the conviction of its injurious effect.

7. "To dismiss from the catalogue of remedial agents all those which under the ordinary circumstances of their administration are liable to injure the stamina of the human constitution; more particularly the mineral poisons, such as mercury, arsenic and antimony, and all of their various preparations, and to substitute in their place articles derived from the vegetable kingdom, which are not only as powerful in their operation, but far more safe and salutary in their immediate effects upon the human system."

The system of Free Lectures adopted at Cincinnati was discussed and a resolution of disapproval adopted on the ground that its operation was injurious to other colleges. This, however, was rescinded as embracing a matter beyond the province of the National Association.

The Fourth Annual Meeting was held at the Hall of the Eclectic Medical College of Pennsylvania, in the city of Philadelphia, on the tenth and eleventh days of May, 1853. Dr. John Simms, of Delaware, was elected president, Doctors Levi Reuben and

Henry Hollembaek, secretaries, and Dr. Thomas Cooke, treasurer.

Dr. Calvin Newton submitted an address in which he set forth elaborately a plan for the advancing and future triumph of Eclecticism. He considered the necessary step to be by means of Medical Societies, and a more perfect organizing of the National Association. He proposed that that body should be constituted in part of Delegates from States and minor organizations. State Societies were now largely attended as annual jubilees, he remarked; but they should be employed, he insisted, to establish and develop professional knowledge. There should also be District Societies meeting quarterly. In these organizations—National, State and local—professional improvement should be the object sought.

Dr. Newton was also strenuous in behalf of proper means and a proper standard of medical instruction. Medical colleges he regarded as constituting the principal wheels for rolling on the car of Scientific Reform in Medicine. The requirements of students in order to be candidates for graduation should be as high, or even higher, than elsewhere. Those whose province it is to be teachers in our schools, must be men well trained—not only in matters of medical practice, but of Medical Science, and even in general literature. "Their ambition should be to avail themselves of all the professional advantages afforded here and in Europe. They should have a fair pecuniary compensation; and to meet this, the price of tuition should be higher." That which costs nothing is generally valued at nothing, he declared; and that which costs little is valued at little. What is paid for will be appreciated.

Upon "petty and unchartered Schools," Dr. Newton was sternly severe. They were endeavoring, he asserted, to allure to themselves unsuspicious students by the inducement of graduation after a few weeks, or at most after a few months employed in professional study. They were a curse to Eclecticism and ought to be repudiated. Several such, he stated, had sprung up in the last year and had already passed out of existence. "Bodies to create ashes they never had."

The Association adopted resolutions of the same tenor, which reprehended the attempt to sustain Medical Colleges without an adequate charge for tuition, deprecated the establishing of rival Schools where well-conducted Medical Colleges already existed, and disapproved of the endeavor to establish unchartered Schools without the strongest reasons.

The persons who offered to graduate medical students without examination, and without the time usually required to be spent in professional study, were declared to be "practicing the grossest imposition, encouraging quackery, and unworthy of confidence."

The support of Eclectic Colleges was distinctly demanded. It was declared to be "the duty of Eclectic practitioners to encourage their students to resort for their professional education to well-regulated and established Eclectic Colleges, as affording advantages superior to what can be gained at institutions of a different faith, and thereby qualifying them to be more successful practitioners."

A report by Dr. Walter Burnham was also adopted recommending the formation of State Eclectic Medical Societies in all the States, the further establishing

of auxiliary district societies, and the appointing of delegates from them all to the National Eclectic Medical Association.*

The Fifth Annual Meeting of the Association was held at Worcester, Massachusetts, on the ninth and tenth of May, 1854. There was a large attendance, chiefly from New England and New York.† There was a disposition in other regions to discountenance further friendly relations. Dr. Walter Burnham was elected president; Doctors Cyrus Johns, of New York, and M. Gabbert, of Tennessee, vice-presidents; Doctors R. O. Williams, of New Hampshire, and H. I. Fisk, of Connecticut, secretaries; Doctors G. W. Morrow and John W. Johnson, corresponding secretaries. The sessions were devoted to matters important to medical men. The new president was earnest in this, urgent to advance consensus of professional interest, and severely deprecated the dissensions and jealousies which were cultivated to the point of personal hostility.

The death of Calvin Newton cast a deep gloom over the proceedings. Dr. Levi Reuben delivered an eloquent oration, giving a brief summary of his aims and what he had accomplished.

"He did not aim to be a discoverer," said the speaker. "His object was to give the Reformed Practice of Medicine a sure foundation. He found it made up of very sensible and successful empiricisms;

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* The present National Eclectic Medical Association adopted this plan in 1877, and required that all candidates to become members must be nominated in future from such State and local societies, instead of personal application or the recommendation of individuals.

† Among the new members this year were many who became noted in future seasons; among them, Doctors F. H. Kelley, Levi Reuben, Marshall Calkins, A. Jackson Howe, H. D. West. J. M. Graves, G. N. Langdon, J. M. Bishop, F. A. Bosworth, H. W. Buxton and Ellsworth Burr.

he left it based on the broad foundation of a sound pathological and therapeutical philosophy."

The resolutions adopted at this meeting deprecated the multiplying of medical colleges, and urged the support of those institutions which were duly supplied with proper means and facilities for instruction in the various departments. The fellowship of the Association was assured to all genuine Medical Reformers, whatever the name, but refused to those whose leading remedies consisted of "the mercurials, arsenicals, antimonials and general bloodletting, together with other means and methods equally destructive to life and health."

The Sixth Annual Meeting was held in the city of New York on the fifth and sixth days of June, 1855. The Call had been made in terms according with a resolution adopted at the previous meeting, and many of those in attendance were physicians who had been affiliated with the Reform movement set on foot in 1851. This was significant of the disposition which was fast gaining ground to obliterate as far as possible the landmarks and controversies which had divided the Eclectic and Botanic schools.*

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* With this purpose, Dr. J. R. Buchanan and Dr. I. M. Comings, neither of them, were in sympathy. They were at opposite ends of the magnetic pole, and alike hostile to whatever did not accept their authority. One railed at the meeting because of the Botanic and Reform physicians in it; the other derided because the dean of the Eclectic Medical Institute, as if speaking *ex cathedra*, had formally repudiated it. In both instances the words recoiled upon the men who uttered them. Among the Eclectics at the meeting were Dr. R S. Newton of the Eclectic Medical Institute; Dr. H. Hollembaek of the Eclectic Medical College of Pennsylvania; Drs. Levi Reuben, Elijah Whitney, Grover Coe, H. E. Firth, B. J. Stow, ex-president John Simms. Of the Physopathists and Reform physicians, many of whom were afterward known as Eclectics, were Doctors G. W. Morrow, John W. Johnson and Ellsworth Burr, of the Worcester Medical Institution; Isaac J. Sperry, Joseph D. Friend, H. A. Archer, of the Metropolitan Medical College; E. J. Mattocks; John Law, Herbert Fearn.

Dr. Wooster Beach was elected president, and introduced by Dr. Walter Burnham as the Father of Eclectic Medicine. The other officers were Doctors J. W. Johnson and Silas Wilcox, vice-presidents; Cyrus Johns and H. I. Fisk, recording secretaries; Hermes M. Sweet and Frank H. Kelley, corresponding secretaries; W. H. H. Crandall, of Pennsylvania, treasurer.

The practice of reporting upon the status of Eclectic Medicine in the several States was instituted at this meeting. A discussion resulted which exhibited the predominant sentiment to be in favor of harmonizing minor differences and coöperating for the common good.

Dr. Burnham remarked that the platform of the Allopathic School was to fight every body else. He insisted that Reformers ought now to join in one solid phalanx to fight the Allopathic School.

Dr. I. M. Comings proposed that a platform of principles ought to be set forth upon which all might stand.

The "Baltimore Platform," adopted by the Reform National Convention, was accordingly adopted: "1. That in the administration of remedial agents we should employ only those, the therapeutical action of which is physiological and not pathological. 2. That disease is not vital action, but that condition of a part which disqualifies it for the performance of its functions in a normal manner."

Dr. Beach asked attention to the new procedure of obtaining the active principles of the medicinal plants in a concentrated form. He laid down the necessary conditions: that they should be reliable, and that they should be brought into as small a compass as possible,

and the most elegant form for exhibition, without injury to their medicinal qualities.

The subject of Medical Colleges was also considered. Dr. Burnham submitted a report in favor of encouraging the institutions in favor of medical reform, "and those only which are based on these principles, and such as are well supplied with the means and facilities for a complete and thorough course of instruction in all the departments of medical science."

Dr. Burnham also reported a resolution recommending the Trustees of the several medical colleges to admit to the general course of lectures such women as might desire to avail themselves of the advantages of a thorough medical education, or else to provide them with such private instruction as was best adapted to this end.

This was the first act of a general body of physicians to sanction the instruction of women in Medicine.

Dr. Reuben presented a series of resolutions in regard to the preparation of vegetable remedies in the form of educts and active principles. The discovery and isolation of these, he insisted, were original with the Reformed School, but members of the Old School and editors of their journals, now claimed them as their own in a dishonest and dishonorable manner knowing all the while that the credit did not of right belong to them.* The resolutions were adopted.

The Seventh Annual Meeting was likewise held in New York on the fourteenth and fifteenth days of June, 1856. The members in attendance were principally from the Eastern and Middle States. The constitution and platform, the same as had been

* Even the late Dr. J. Marion Sims proposed to "*introduce* Pinus Canadensis to the profession;" and also, the Stillingia Compound, or "McDade's formula."

reported by Dr. T. V. Morrow, in 1849, and adopted, were now subscribed and adopted anew.* Dr. Samuel Tuthill was elected president for the ensuing year; Doctors R. S. Newton and M. Van Buren, vice-presidents; Doctors Joseph D. Friend and Grover Coe, recording secretaries, and Doctors Hermes M. Sweet and Zoheth Freeman, corresponding secretaries.

The new methods of manufacture of medicines, the obtaining and employing of the educts and active principles of the vegetable remedies, constituted an important feature of the discussions.

Dr. H. E. Firth called the attention of the Association to the action of Dr. Joseph R. Buchanan and his associate editors of the *College Journal of Medical Science*, misrepresenting the members of the National Association and denouncing it as having no valid existence. The matter was referred to a Committee consisting of Doctors H. E. Firth, J. D. Friend and Grover Coe, who reported a preamble and resolution declaring that Dr. Buchanan had not been a member of the Association for five years past, and that the claims of the others to speak for Eclectics were as untenable as his, and cautioning the public against receiving their statements.

The other proceedings were devoid of interest. Dr. Friend spoke of the importance of a retrospect of the progress of Medical Reform, and the value which would be attached to a history of its rise and progress in this country. Other speakers described the condition of the Reformed practice as never more

* The medical colleges appear to have been largely represented. Doctors Walter Burnham, Frank H. Kelley and John W. Johnson were professors in the Worcester Medical Institution; Dr. Henry Hollembaek represented the Eclectic Medical College of Pennsylvania, and Doctors R. S. Newton, Z. Freeman and J. M. Sanders were from the Eclectic Medical Institute, then in litigation.

prosperous,* and cited the fact that the legislatures of the several states had repealed the oppressive medical statutes. They deplored the indifference of practitioners in regard to the meetings of their State and National Associations, as suicidal, and exposing them to a renewal of the old legislation.

The Eighth Annual Meeting was held at the hall of the Eclectic Medical Institute in the city of Cincinnati, on the seventeenth and eighteenth days of June, 1857. Dr. Robert S. Newton, of Ohio, was elected president for the coming year; Doctors John Kost and Henry Hollembaek, vice-presidents; Doctors Grover Coe and John M. Scudder, recording secretaries, and Doctors L. E. Jones and I. N. Comings, corresponding secretaries. There was little interest exhibited and the meetings occupied but a brief period each day. Few of the members who had been appointed to read papers had attended, but transmitted their essays. The next annual meeting was appointed at Cincinnati, in June, 1858, but it was not held, nor was even a notification issued.

The National Eclectic Medical Association had been brought into active existence by the masterly energy of Dr. Thomas V. Morrow and his helpers, and was sustained after his death by the cöoperation of the public-spirited Reformers of New England and the Middle States, Calvin Newton, Thomas Cooke and their associates. When these men likewise passed from life there were none left strong and disinterested to continue the organization in efficient activity. There was a lack of *esprit de corps* which was sure to be fatal. The medical colleges were disorganized by

* The number of Eclectic and Botanic physicians in the United States at this time was estimated at eight thousand.

jangling and jealousies, and could no longer contribute their efforts; and the practitioners who had attended the meetings had been made to feel themselves regarded as an unimportant and insignificant element. Hence, after the meeting at Worcester there was a general decadence, till at the last, its vital energy exhausted, the Association passed away unnoticed and hardly remembered.

WORCESTER MEDICAL INSTITUTION.—CONTINUED.

After the changes in the Faculty, the condition of affairs in the Worcester Medical Institution had seemed to be greatly improved. Dr. Walter Burnham, the professor of surgery, was at the zenith of his career as an operating surgeon, and he had no superior in America. Dr. G. W. Morrow and Michael Gabbert, of Botanico-Medical College of Memphis, Dr. E. M. Parrit and Dr. E. S. McClellan were the others. The classes were larger than they had been before,* and the College was in its own building, encumbered, however, with a mortgage. The medical societies of New England, including the new Physo-Medical Society of Connecticut and excluding the other, were enlisted in its support.

In 1852, Dr. Newton attended the annual meeting of the National Eclectic Medical Association at Rochester, in company with Dr. Burnham. He soon signified his appproval of the sentiments† avowed by

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* Of the graduates of 1852 were Doctors George W. King, of New York; Noah R. Martin and O. H. Jewell, of Maine, and Frank H. Kelley, of New Hampshire, afterward professor and editor of the Worcester *Journal of Medicine.*

† At this period the Botanic physicians of New England had very generally adopted the designation of "Physopathists."

the principal members, and decided to unite with them. He was elected president of the Association. This was apparently most fortunate, for he possessed in an eminent degree the superior constructive ability joined with unselfish devotion which had characterized Thomas V. Morrow.

The prospects of a permanent National body were brighter than ever.

Dr. Newton was also successful in another matter. The rival Colleges of Syracuse and Rochester agreed to harmonize their differences and unite their Faculties. Accordingly, the corporation of the Central Medical College was relinquished; Doctors Reuben and Dolley were added to the Faculty at Syracuse, and by another agreement Doctors Newton and G. W. Morrow, of the Worcester Medical Institution, also became professors.*

The arrangement, however, lasted but a solitary term. The next season, Doctors Newton, Morrow, Dolley and Reuben resigned all connection with the institution, and Dr. Reuben became a professor at Worcester.

The ensuing autumn, Dr. Newton died. This was a calamity alike for the college of which he was the founder and master spirit, and to the National Eclectic Medical Association, of which he had become the most prominent member. It was necessary to take steps to assure the future of the institution.

A Convention of the friends of the College was summoned, and met at Worcester on the twenty-sixth

* Only three of the Faculty of Syracuse remained in office, Doctors S. H. Potter, Dwight Russell and Dr. Joseph Brown, now dean. Dr. Joseph Flattery was elected teacher, but did not lecture. He made a sensation by procuring a facsimile of the diploma of the College with signatures of the officers, and hawking it to unwary individuals over New York and Canada.

day of October, 1853. About sixty were in attendance.* Dr. Walter Burnham was chosen to preside. After a full survey of the field, resolutions were adopted in regard to future management and provision for the indebtedness. Aid was pledged to the Institution till it should be placed upon a permanent basis. The members of the Convention evinced great resolution, and it was confidently believed that a new era had begun for Young Physic.

The Board of Trustees accordingly made the changes as advised, and adopted an order immediately afterward that women should no more attend the lectures as medical students. The prosperity of the College, however, was by no means assured by this action, and it was rescinded at a later term. The effort to continue the operations of the College received great encouragement. The terms, as usual, were held in the spring, enabling the students, in the true Yankee style of those days, to gain the money for tuition by teaching school of winters.† The Faculty consisted of able and resolute men, who stood at the head of their profession. Two of them‡ held

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* Many of these were representative men. Of the number were Doctors Ellsworth Burr, Job T. Dickens, John Stowe, Walter Burnham, Marshall Calkins, Horatio G. Newton, Frank H. Kelley, G. W. Skinner, B. S. Warren, Nathaniel Brooks and Isaiah Hutchins.

† In the class of 1854, Dr. Andrew J. Howe graduated and delivered the Valedictory Address, advocating the strict Botanic and Eclectic doctrine. Among the graduates of 1855, were Doctors John Stowe, H. H. Brigham, H. M. Hodgins, Lysander Chandler and James M. Bishop; and Dr. Stowe delivered the Valedictory Address. In 1856, Doctors John G. Johnson, William Jackson and R. M. Ayres were graduates, and the Honorary Degree was bestowed upon Doctors George Beard Isaac Smith, and several others.

‡ Doctors Michael Gabbert and G. W. Morrow. The other professors were Doctors Walter Burnham, Levi Reuben, John W. Johnson and James Bushee, with Dr. F. A. Bosworth as Demonstrator of Anatomy. Dr Reuben left in 1855, and Dr. A. J. Howe became demonstrator. In 1856, Dr. Howe was appointed Professor of Anatomy, and Dr. John Stowe demonstrator.

chairs also in the Botanico-Medical College of Memphis, showing that no rancorous partisan feeling existed. Dr. Gabbert died in 1856, and his place was taken by Dr. Ellsworth Burr, of Connecticut. Dr. John King, of the Eclectic College of Medicine of Cincinnati, was appointed to the Chair of Obstetrics. The same year the Worcester *Journal of Medicine*, then conducted by Doctors F. H. Kelley, R. O. Williams and Andrew J. Howe, was discontinued. The arrangements to defray the indebtedness had not been successful, and an application to the General Court for an appropriation was defeated. The Trustees were compelled to sell the building, which had been built with such glowing expectations; and in 1857, the lecture-term of the institution was held at Chapman Hall, in the city of Boston. The resolution inhibiting women from attending was now rescinded, and two received the degree of Doctor of Medicine at the next Commencement.* Dr. Burnham now resigned from the Faculty, and Dr. John W. Johnson succeeded him as dean. Another term was held in the autumn of 1858 and the early months of winter.

Meanwhile a proposition was submitted for a union with the Metropolitan Medical College. The trustees of the latter institution appointed a Committee for negotiation, and an Appeal was put forth by friends of both institutions for an endowment. Suddenly a jealous spirit arose among the supporters of the Metropolitan Medical College, and the affair was abruptly terminated. The sessions of the Worcester Institution were suspended. Care had been taken to preserve the validity of the charter, and members of

* The class was small, and only nine graduated. Honorary degrees were bestowed upon Doctors B. J. Stow and J. A. Dodge.

the Massachusetts Eclectic Medical Society have several times proposed a resuming of active operations. Whether, however, this will ever take place is a problem of the future.

TROUBLES AT CINCINNATI.—CONTINUED.

In 1854, the Trustees of the Eclectic Medical Institute appointed Dr. Charles H. Cleaveland, of Vermont, professor of Materia Medica, to succeed Dr. Bickley. The new professor had been educated in the orthodox school, but for some occult reason had declared himself in sympathy with the Eclectics. He knew little of the new remedies. At this time great interest was taken by Eclectic and Reform physicians in the new discovery of "Concentrated Remedies." These consisted of educts from the various medicinal plants used in Botanic practice, and were prized as containing the principal active virtues, while obviating the disagreeable necessity of administering remedies in bulk.* Dr. Newton was a zealous advocate of the new medicines, while Dr. Cleaveland distrusted them and seemed even to hold them in contempt. He had not even outgrown the old-fashioned dosing with mercury. His utterances furnished the Physopathic physicians with a weapon against the Eclectics which they did not hesitate to wield. Naturally and almost unavoidably the different teachings with Faculty resulted in personal disputes.

* Dr. Isaac Jacobs, of Maine, early engaged in these investigations, and was followed by B. Keith, of New Hampshire, afterward of New York city. Dr. John King made the discovery of the podophyllin resin and several other resinoids, and Dr. William S. Merrell, of Cincinnati, going beyond them all, established the Eclectic pharmacal products on a firm foundation, largely assuring the permanency of the new practice.

The one made the medicines manufactured by Dr. Keith his target, and the other as pertinaciously insisted upon their purity and value as remedies. Other issues were presently injected into the controversy, and the Faculty divided into two parties. All but Dr. Zoheth Freeman took sides with Dr. Cleaveland.*

At this time Dr. Newton owned and published the *Eclectic Medical Journal*, which had succeeded the *Western Medical Reformer*. He also published the *Newton's Express*, as a separate venture—a practice not uncommon with the Faculty of the Eclectic Medical Institute.† His manner of lauding Keith's medicines in those periodicals, as well as setting forth the operations of the Clinical Institute, was distasteful to his fellow-professors. They proposed that Dr. Cleaveland, being a scholarly man and accomplished writer, should conduct the Journal. Dr. Newton would not consent, and they established the *College Journal of Medical Science*, with Dr. I. G. Jones and all the Faculty except two as editors. The *Eclectic Medical Journal* was thus virtually repudiated as representing the Institute.

The Faculty had also taken a position of disloyalty and open hostility to the National Eclectic Medical Association. Dr. Buchanan had projects of his own that he was eager to carry out. He had not been in sympathy from the first with the views and ambitions

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* The *Daily Freeman* (Cincinnati) of May 1, 1856, explained the matter in this way: "A difficulty in relation to a female student made the Newtons and Freeman allies, and a great variety of circumstances arrayed Drs. Cleaveland, Sherwood, Buchanan, Hoyt and King in opposition."

† Dr. Buchanan published the *Journal of Man*, to set forth his peculiar views of Neurology, and Dr. Cleaveland the *Journal of Rational Medicine*, and there are other instances.

of Dr. Thomas V. Morrow in relation to an organization of the several bodies of Botanic and Reformed physicians. He employed his influence steadily against the National Association, and presently his associates concurred with him.

He took the occasion of the Annual Meeting at New York, in 1855, to proclaim his unfriendly sentiments. The fact that it was presided over by such men as Walter Burnham and Wooster Beach passed for nothing. He put forth his disclaimer in the secular journals in no modest or gentle terms. The Association, he affirmed, was in no sense a national affair, and did not represent the views or sentiments of American Eclectics. It was a conglomerate, made up of individuals from the different schools. He, himself, as an individual, as a medical professor, and as dean in behalf of the Faculty, entered his protest, adding *ex cathedra* this declaration :

"The Eclectic Medical Institute of Cincinnati is the parent school in which the name *Eclectic* was first adopted as a designation of liberal American principles in medicine, anterior to which the title American Eclectic was unknown."

This assumption of exclusive superiority and orthodoxy was nowhere met with a semblance of obsequious deference. Several editors of Reform journals responded with derision. The Worcester *Journal of Medicine* made a reply as sharp as the attack. "He labors under the impression," said Dr. F. H. Kelley, "that Eclecticism comes only from the Cincinnati Eclectic Medical College, and radiates from that institution solely because he is connected with it. He speaks as if he were the founder and living embodiment of the whole system. And especially

does he 'protest' against its use by a medical association in New York so far off from what appears to him the centre of the world, of the name '*National* Eclectic Medical Association.' He appears unwilling to allow that there is much Eclecticism east of the Alleghanies."

Such was the general response from Reform circles in every quarter. He was regarded as fond of disturbance, a disorganizer and a visionary, and his sympathy with the Eclectic school generally doubted. Of course, he never abated in his opposition, but repeated his disclaimers, and finally induced the Faculty of the Institute to unite in a declaration of hostility to the Association,* and to Keith's new remedies.

Dr. John King had also his controversy with Dr. Newton, which had extended over many months. It was a darling ambition of Dr. Newton to figure as an author, and the two had been engaged together in the compiling of the *American Eclectic Dispensatory*. Dr. King declared Dr. Newton guilty of ill faith in the matter and of gross plagiarism in his contributions to the work, and finally gave him notice in the summer of 1854, that his name should no longer appear on the titlepage. Dr. Newton immediately entered into an agreement with B. Keith & Company for the publication of a book which should supersede the *Dispensatory*,† and bring their preparations into

* The following resolution was adopted on March 5, 1856: "Resolved, That the Faculty of this Institute do not recognize any existing organization in the United States as 'The National Eclectic Medical Association,' and will not authorize any person or persons to represent us in any body so styled, as at present constituted."

† Legal proceedings were instituted against Dr. King for the taking of copyrighted matter from another work. He supposed that Dr. Newton instigated the suit.

general favor among Eclectic physicians. Having two medical journals under his control, he was able to do this effectually.

Dr. Newton had sagacity to perceive that it was unwise as well as inconsistent for the Eclectic Medical Institute to maintain an attitude of hostility toward the National Eclectic Medical Association. The *Journal* reflected his sentiments and so constituted another ground for angry dispute. These matters were presently all included in the personal controversy with Dr. King. An agreement was finally made which was peculiarly significant in its terms, but which was divulged and disregarded almost as soon as it was made.*

In the month of March, 1856, upon the very heel of this negotiation, the controversies passed beyond the stage of amicable adjustment, to be decided in another way. The Eclectic Medical Institute was a joint-stock corporation with an authorized capital of twenty thousand dollars and power to increase it to sixty thousand. Only nineteen thousand, however, had been issued ; part of it to defray pecuniary obligations. About a third of the whole amount was the property of Dr. L. E. Jones, and a somewhat smaller portion belonged to Dr. Newton. The Trustees, willing to get off with as little work as possible, had

* It was stipulated that Dr. Newton should abstain from publishing in his *Express* or in the *Eclectic Medical Journal* anything reflecting upon other professors or upon the College itself ; that he, in neither publication, should "advocate and uphold the so-called National Eclectic Medical Convention [Association], which is to meet in New York next June, and which has been repudiated by the Faculty of the Institute ;" and that Dr. Newton is not to keep before the public, as Associate Editor, any gentleman known to be connected with the manufacture and sale of nostrums." This last clause related to Dr. Grover Coe, and perhaps to Dr. J. M. Sanders, as being employed by B. Keith & Company. The "Concentrated Medicines," which were prepared by that house, were included under the name of "nostrums."

authorized the Faculty of the Institute, several years before to receive donations and subscriptions. Dr. Newton held the office of Treasurer, both of the Faculty and Board of Trustees. The time had come to pay the usual dividend to the stockholders, and it should be paid from the receipts. This contingency produced the rupture. Dr. Newton accused Dr. Buchanan of having, in his capacity of dean, collected the money from the students, and made default in the payment. He threatened to report the matter to the Trustees. On the other hand it was asserted that Dr. Newton himself, had collected between seven and eight hundred dollars from the students in the graduating class, and suppressed the fact.

There were, of course, several other issues and complaints that were more or less discussed. Dr. Newton was represented by his colleagues as ignorant and illiterate, incompetent to lecture, and as having a disposition to deal with individuals and engage in enterprises of doubtful character, and not consistent with his position as professor in a Medical College. In short, the controversy included both parties, and could only be decided by the Board of Trustees to be elected on the first Monday [7th] of April.

An active struggle began to make sure of a majority of the votes. Dr. L. E. Jones held the decision in his own hands, and both overtures and threats were made to persuade him to transfer his stock and votes to the friends of the five professors. He refused, and they resorted to another expedient. They took their precedent from the transaction with Doctors Baldridge and Jones, when the original stock was issued. They, not unnaturally, supposed that the

power given the Faculty by the Trustees, to receive donations and subscriptions, and transact other important business, was sufficient to warrant the issue of additional shares of stock. A meeting of the Faculty was held accordingly, on the evening of the fifth of April, which voted to remove Dr. Newton from the office of Treasurer, and to issue new stock to the amount of seven thousand dollars. These were transferred at once to purchasers for promissory notes, payable in five years, as the equivalent.* This assured the professors and their party a majority of the shares of the stock.

Nevertheless, the law did not confer powers of cumulative voting, without restriction, upon stockholders. The expedient was employed by both parties to multiply their votes by transferring shares to others, and obtaining from them the power of attorney to vote in their name. Each party, professing to act for the Corporation, held an election, and two sets of Trustees were chosen.† Dr. William Sherwood was elected Treasurer by one Board, and Dr. R. S. Newton by the other. The former Board after organizing adjourned till the next Saturday evening, when they were estopped by an injunction from proceeding further. Meanwhile, the lectures of the spring term

* The certificates were already prepared by Dr. King, who wrote an elegant hand, like fine copperplate engraving; so that there was no delay. Indeed, Dr. I. G. Jones had given his note for shares of this stock several days before this meeting was held.

† The Board elected at the College Building consisted of the Rev. D. W. Clark, D. D.; Rev. I. D. Williamson, D. D.; Rev. C. L. Loos, S. B Keys, General James Birney, C. H. Gould, George S. Jenkins, J. Reeves, Dr. J. Wilson, Dr. J. R. Buchanan, Dr. John King, Dr. William Sherwood, Dr. C. H. Cleaveland. The Board elected at Dr. Newton's house was composed of Messrs. W. B. Pierce, J. P. Mayer, A. Death, J. C. C. Holenshade, W. F. Hurlburt, H. Leonard, J. P. Cunningham, C. S. G. Wright, H. M. Ritter, J. G. Henshall, Dr. R. S. Newton, Dr. L. E. Jones, Dr. Z. Freeman, Dr. A. H. Baldridge, Dr. Orin E. Newton.

were continued at the College building, then in Dr. Sherwood's custody ; but Dr. Newton declined to take part. The injunction was removed on the twenty-ninth day of April, and active measures began. The Board of Trustees having possession of the College met the same evening, and voted to remove Doctors Newton and Freeman from the Faculty, appointing Doctors Sherwood and King to their places.

The other Board also assembled the same evening, and in turn voted to remove the five professors from their chairs. Dr. Newton was authorized and directed to take possession of the Institute building.

The attack was made the same evening with many indications of premeditation, even to minute particulars. A door in the building was broken open, and Doctors Newton and Freeman entering, took formal possession of the upper floors. They were accompanied by a party numbering about thirty, obtained from the streets of a large city, and indifferent in regard to what they did. They were armed with pistols, knives and bludgeons. Doctors Cleaveland, Sherwood and Buchanan attempting to go up, were forcibly resisted and their lives threatened. They remained with the students of the College in the rooms below. A little before daybreak a party of individuals sallied from the upper part of the building, went away and presently returned, dragging with them a six-pound cannon. It was afterward learned that the garrison above had already brought powder and slugs, with provisions for a prolonged siege. The cannon was seized by the police, but no attempt was made to dislodge the men from the building.

The five Professors declined any further physical conflict, but left the College in possession of its

garrison. A respectful application was made for permission to conclude the course of Lectures, and refused. Rooms were immediately engaged at Gordon's Hall, to which the majority of the students followed them. Party spirit was very warm, and every endeavor by promise and alarm was employed to deter them. It was even represented that the organization was illegal, and that the degrees which might be conferred would be invalid in law. It must be acknowledged, nevertheless, whatever the merits of the controversy, that the ablest and most scholarly members of the Faculty were of this party. At the close of the term, twenty-one students received diplomas in the name of the Eclectic Medical Institute of Cincinnati; and a winter session was duly announced. In order to complete the number required in the Faculty, Doctors Walter Burnham and Andrew J. Howe, of the Worcester Medical Institution, were elected Professors of Surgery* and Anatomy, and Dr. Sherwood was transferred to the Chair of the Theory and Practice of Medicine.

Meanwhile the Board of Trustees, now in possession of the College building, also organized a Faculty to complete the spring term, appointing Doctors William Byrd Powell, L. E. Jones and J. M. Sanders in place of Doctors Buchanan, Cleaveland and Hoyt. The term did not last many days, closing on the thirteenth day of May. Fifteen students were graduated.† Arrangements were made shortly afterward for the

* Dr. Burnham pleading the condition of his health, did not lecture, and Dr. Howe delivered the course in his place. After this Dr. Howe made his home permanently in Cincinnati. Dr. King was at this time a professor in the Worcester Medical Institution.

† Of this number were Doctors John M. Scudder and Edwin Freeman; Dr. Scudder delivering the Valedictory Address.

ensuing winter term. Drs. Bickley and Baldridge were appointed to the places which they had filled several years before; Dr. John M. Scudder was made Professor, and Dr. Edwin Freeman Demonstrator of Anatomy.

The National Eclectic Medical Association met in June, in the city of New York. Both Dr. Newton and Dr. Freeman attended, and took an active part in the proceedings. Dr. Newton read the Constitution of the Association and the resolutions as adopted in 1849 when Dr. Morrow was president, and they were immediately adopted and signed by those in attendance. Resolutions were also adopted disapproving of the inimical action of the five professors of the Eclectic Medical Institute toward the national organization.

The summer was devoted by both parties to angry controversy and legal maneuvering. The journals published by the respective parties teemed with special pleading, accusations, recriminations,* and personal reviling, saturated often with flagrant indecency, as is the emanation of the swine-pen or

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* It was a favorite taunt for each to accuse the other of a predilection for calomel. An article of Dr. Cleaveland in the *American Lancet*, made use of a sentiment for which he was severely criticised, both by the Physopathists and his Eclectic adversaries.

"I am of the opinion," said he, "that, as a glandular stimulant, podophyllin alone or combined with bloodroot, will be found equal to calomel, and that as a cholagogue cathartic, it is superior, more certain, and more safe than the mercurials; but that it is not a solvent, and therefore cannot be relied on to supply the place of the mercurials in those cases where the solvent property is demanded as in inflammatory adhesions of the tissues of the eye, or in pleural or in other adhesions of serous surfaces. Neither do I think it will remove deposits of inflammatory exudations following syphilitic infections, as calomel will."

Dr. Cleaveland tried lamely to explain away this language so as to divert attention. Perhaps its counterpart can be found in this paragraph of Dr. J. Milton Sanders, which, in its way is equally incapable of ready deglutition, especially in view of actual fact.

"We are happy to think that the great majority of the Allopathic profession are men of liberal minds and of accomplished education. *The Allopathy of Europe, which is really modern Eclecticism*, is now presenting to the world the singular fact of the medical profession marching forward in the van of scientific progress. This is the case, likewise, with a large portion of American Allopaths."—*Eclectic Medical Journal*, April, 1856.

some filthier domain. We look in vain for that quiet dignity and self-possession indicative of a serene consciousness of being in the right, and beyond the vile atmosphere in which reptilian creatures abound. Perhaps they were displayed by those who performed their duties in quietness, meeting reproach with silence, and biding the issues with patience, conscious that even with defeat, the cause of right is nevertheless not lost.

An action of *quo warranto*, by which to determine which was the lawful Board of Trustees of the Eclectic Medical Institute was pending through the summer. The decision was finally made on the twenty-fifth day of October. As is too often the case in lawsuits, the intrinsic merits of the controversy did not enter into consideration. It was admitted that the Board of Trustees had constituted the Faculty a Committee of Finance, having power to receive subscriptions to the capital stock. The sale of stock for promissory notes, however, had not been authorized in that resolution. The stock, therefore, which the Faculty had issued on the fifth of April was ordered to be cancelled, and the Board of Trustees elected at the house of Dr. Newton declared to be the lawful Board.

The terms of this decision exhibited ample probability that it might he reversed by the Supreme Court. The wiser second thought led the defeated men to refrain from carrying on the legal contest further. While the decision of the Court required the cancelling of the new stock which had been issued, it fully exonerated them from any imputation of intentional misconduct. They had no more to gain by an appeal and ultimate victory than a title stained by

dishonor and contention,* and a franchise accompanied by an indebtedness which was liable to wreck the Eclectic Medical Institute.

Accordingly, upon the twenty-second day of December, 1856, articles of association† were duly filed in the office of the Auditor of Hamilton county, Ohio, creating a corporation under the name and style of "THE ECLECTIC COLLEGE OF MEDICINE."

The new institution, despite its drawbacks, was not long in gaining countenance from the leading Eclectic physicians of the United States. Its teachers were superior, and they had the discreetness to terminate the controversy, so far as related to offensive personalities, in the pages of the *College Journal*.‡

The winter term was successful, both in regard to patronage, and the character of the class. Twenty-nine students graduated, many of whom are yet in active and creditable practice.§

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* *College Journal*, December, 1856, "The Charter [of the Eclectic Medical Institute] has never been regularly obeyed by the corporation, and the legal existence has, therefore, no substantial basis upon which an institution can be sustained."

† The "corporators" applying for this charter were Joseph R. Buchanan, William Sherwood, A. Jackson Howe, C. H Cleaveland, James C. C. Holenshade, John King, William A. Ashton, A. H. Wells, William B. Sheppard, William S. Sampson.

‡ *College Journal*, November, 1856, "Knowing, however, that 'a controversy with such men * * who have no regard for truth, nor sense of strict honor, is endless in its nature, and becomes lower and lower as it proceeds,' it was finally determined to embody all the leading facts together, with an exposition of the character of our opponents, in the form of a pamphlet, which might be sent to all who desire to know the truth, and thus leave the pages of the *College Journal* to be occupied by matter of scientific interest and practical importance. * * * Our war with such individuals shall hereafter be confined, as far as possible, to one of non-intercourse."

Writing upon the topic at a later day, the editors remark that in regard to the slanders which some kind friends thought ought to be contradicted, they could only say that the individuals propagating them were unworthy to be believed, and it was not well to occupy space with matters of a personal character.

§ Among the graduates were Doctors Isaiah Brothers, Meredith W. Henry, R. Winans, H. A. Peterman, Sarah C. Brigham, Eliza A. Brown. Honorary degrees were also conferred upon Doctors Horace G. Barrows and Samuel S. Judd.

The Eclectic Medical Institute also followed the career which was before it. Spurred on by rivalship, renewed endeavors were put forth to extend its influence and keep unbroken the number of its students and patrons. In this it seems to have been very successful, graduating forty-two at the close of the winter term and twenty-three at the spring term.*

The annual meeting of the National Eclectic Medical Association was held this summer at the Eclectic Medical Institute. Dr. Newton was elected president, and Doctors Grover Coe and J. M. Scudder, secretaries. The proceedings were significantly tame and uninteresting. The medical colleges were suffering from intestinal discord and financial depression, and the controversy at Cincinnati added its malign influence. The meeting was ill attended, and, although the succeeding one was again appointed at Cincinnati, it was only a perfunctory matter. It was never held, nor even any attempt made to call it together.

For the next two years the history of the two rival colleges was uneventful. The strife ceased to be of interest beyond the contending parties. The Faculties continued each year with incidental changes, some of which, however, were significant. Dr. Buchanan withdrew from the Eclectic College, and Dr. King became the Dean. He continued to write articles for the *College Journal*.† The classes, however, were

* In these enumerations we recognize Doctors Isaac Spangler, Austin B. Westcott, Francis H. Fisk, Daniel W. McCarthy and Herod D. Garrison. The honorary degree was conferred upon Dr. I. J. M. Goss, a graduate of the Eclectic Medical College of Pennsylvania, and eleven others.

† This publication, barring its hostility to Eastern Eclectics and to the National organization, was superior in ability to all the other Reform periodicals. It appears to have been so recognized by the leading Eclectics of that period Among these we enumerate Paul W. Allen, L. C. Dolley, I. J. M. Goss, Abraham Livezy, Dr. E. Smith, R. O. Williams, H. G. Barrows, M. W. Henry, J. A. Henning, W. S. Merrell; also, W. Byrd Powell and John Buchanan. Dr. Powell had become estranged from the Eclectic Medical Institute, and Dr. Buchanan was a favorite contributor to both the journals at Cincinnati.

not quite so numerous as in the rival institution, but they were declared to be more thoroughly instructed.*

The Eclectic Medical Institute made a somewhat greater display of success. There were more changes in the Faculty, but the principal instructors continued the same. In 1858, Dr. Herod D. Garrison succeeded to the Chair of Chemistry, Dr. J. Cam Massie became professor of the Theory and Practice of Medicine, and Dr. John M. Scudder was transferred to the department of Obstetrics. Doctors W. Byrd Powell and A. H. Baldridge were assigned to the equivocal honor of *emeriti*, and not long afterward dropped off the announcements. The graduates that year numbered fifty-seven.† The next year Dr. Charles T. Hart became professor of Physiology, and Doctors Bickley and Massie vacated their respective chairs. The number of graduates was but twenty-six,‡ a significant indication of a waning of the fortunes of the Institute.

It was now becoming manifest that it was ill-advised to continue the existence of the two colleges in this attitude of competition. One or the other, and perhaps both, would succumb. A conference was held between several of the Trustees of both institutions, and an agreement made to drop the organization of the

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* There were eighteen graduates in the winter term of 1857–58, sixteen in the spring term, nineteen in the next winter session, and twenty-four in the spring term. Among them we find the names of Uriah N. Mellette, Constantine Markt, Rebecca V. Anton, J. K. Hoyt, making one hundred and twenty-six graduates and thirty-four Honorary.

† Among these were Doctors W. T. Branstrup, C. T. Hart, Richard Marsh, O. S. Templeton and Elisha S. Warner.

‡ In this enumeration appear the familiar names of F. P. Antle, R. G. Barham, A. P. Colter, Joseph R. Duncan, W. W. Houser and Milton Jay, most of them still in active life.

younger college.* Dr. C. H. Cleaveland gives a further account in the *Journal of Rational Medicine* for January, 1860. After declaring the prosperity of the Eclectic College of Medicine firmly established, he adds that "Dr. King, Dr. Sherwood and Dr. Howe—to whom, in connection with seven others, the Corporators had placed the College and its property *in trust*—without consultation with their associate Trustees, *sold* that which was never theirs to sell," and that it was "done secretly;" also, that they resigned their professorships on the fifth of October on promises of professorships in the Institute, and "late in the evening, without the slightest intimation to the [seven] other Trustees, they produced the writings already prepared in secret, and went through the farce of concluding the bargain and transfer."

Nevertheless, the other Trustees do not seem to have objected to begin the next session at the old College building as in former times.† The declaration was made of adherence to "the principles of practice obtained in the old Eclectic Medical Institute."

COLLEGES OF PHILADELPHIA.—CONTINUED.

The history of medicine in Philadelphia does by no means derive its principal significance and impressiveness from the petty conflicts and misconducts of the

* This proceeding appears to have been brought about chiefly by Dr. John M. Scudder. The *College Journal* made no mention of the transaction, but the *Eclectic Medical Journal*, in a double number for November-December, stated that the union had been effected "some months ago."

† The Faculty was constituted from the professors of the two colleges, and continued so, more or less, for several terms. It consisted of Doctors H. D. Garrison, L. E. Jones, C. T. Hart, Z. Freeman, E. Freeman and J. M. Scudder, of the Eclectic Medical Institute; and Doctors J. F. Judge, John King and A. J. Howe, of the Eclectic College of Medicine. Dr. W. Sherwood was relegated to the distinction of *Emeritus*, and Drs. Bickley and Cleaveland left out altogether.

minor medical colleges. These, certainly, were to be deprecated and rebuked for their influence upon the cause which they represented. Beyond them, however, was the corporation with its multitude of adherents, magisterially assuming to dictate to the entire medical profession, and aspiring to be the umpires with full authority to prescribe the standard orthodoxy, professional respectability, and what should be the legal rights of physicians. For the first quarter of the century the University of Pennsylvania held the field and was able to procure the arbitrary exclusion of all rivals. It had been nourished from the Treasury of the State; its graduates and none others were permitted to hold municipal positions in the city of Philadelphia; and it maintained a lobby at the capital to oppose and prevent all legislation that might be distasteful, or possibly take away part of its exclusive privileges. It was to a degree the counterpart of the British aristocracy, not averse to thriving at the expense of the other classes, while at the same time it was itself fenced about with privileges which were strenuously held fast against encroachment by the people.

In 1825, however, despite the bitter and most vehement hostility of the Faculty and lobby agents of the University, the General Assembly passed an act authorizing the Jefferson Medical College of Cannonsburg to establish a branch at Philadelphia. Dr. John Eberle, Dr. George McClellan, and others, were active in this enterprise. They found it no easy matter, however, to place the new institution upon a permanent basis. There was almost constant quarrelling among the professors, and the college itself failed to secure due recognition as "respectable." Finally,

in 1838, the Legislature separated it from the parent school and gave it a distinct charter by itself. The bitter dissensions, however, now raged more fiercely than ever, and the new Board of Trustees, in 1839, dissolved the Faculty. In the subsequent organization, Doctors McClellan and Colhoun gave place to Dr. Joseph Pancoast. Thus for fifteen years it was a very difficult matter to maintain this school in healthy existence. Its intestinal feuds, and the unceasing opposition of the supporters of the older college, at times almost destroyed its vitality. A young man graduating at that time at the Jefferson Medical College was regarded as having marred his prospects forever, and as having virtually disgraced himself for life.

Meanwhile, the professors who left the Faculty in 1839, lost no time in the establishing of another similar institution. They negotiated with the Trustees of the Pennsylvania Medical College at Gettysburg to open a medical department at Philadelphia. The two brothers, Doctors George and Samuel McClellan, Dr. Colhoun, Dr. Samuel George Morton* and Dr. William Rush composed the staff of instructors. They soon found that their powers as an institution of learning were limited, and applied to the General Assembly for a separate charter. The Jefferson Medical College joined the University in the usual opposition, but without avail, and the new college obtained an act of incorporation.

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* Dr. Morton was the author of a text-book on anatomy, and was widely distinguished as a craniologist. He also contributed largely to the celebrated work of Dr. J. C. Nott and the Hon. George R. Gliddon, *The Types of Mankind*. Dr. George McClellan was also noted for his proficiency as a surgeon. The late General George B. McClellan was his son.

In 1844, application was made to the Legislature for a law to incorporate the Franklin Medical College. At this period the hold of the privileged order of physicians had lost its tenacity every where, and the charter was granted with little opposition.

Another application was made by Dr. James McClintock, in 1847, for the incorporation of the Philadelphia College of Medicine, with the unique condition of holding its lecturing terms only in the summer. Dr. McClintock had been a student of Dr. Eberle and of the McClellan brothers, and was an early graduate of the Jefferson Medical College. He was a ripe scholar in medicine and a skilful practitioner. After graduating he often assisted the professors in their instructions and delivered lectures independently to classes of his own. Though defamed at home as "irregular," he acquired an excellent professional reputation elsewhere. In 1841, he became professor of Anatomy and Physiology at Castleton Medical College in Vermont, and was elected its president. The next year he accepted a similar chair in the Berkshire Medical Institution. Returning to Philadelphia, he declined several other appointments and opened a School of Anatomy on his own account.

His attempt to procure a charter was artfully resisted. Physicians professing to be his friends, did not scruple to malign him, and wrote letters in profusion to members of the Legislature remonstrating against the granting of his application. All, however, was of little avail. Liberal sentiments upon the subject of medicine and medical instruction were now very generally entertained. The people and their representatives in the General Assembly

had become averse to the existence of monopolies, and the granting of privileges exclusively to favored individuals and corporations. The journey of Dr. McClintock to the capital of Pennsylvania met with exceptional success. Within forty-eight hours from the time that he left Philadelphia, to procure the charter for his proposed college, he was on his way home with the instrument in his pocket, enacted by unanimous vote in both Houses and signed by Governor Shunk.

The other medical colleges, however, refused to accept students *ad eundem* from the new institution. Dr. McClintock accordingly made his way back to Harrisburg with a supplementary bill to place the Philadelphia College of Medicine upon a like basis with the others. All opposition to this proved futile and the bill was passed without serious difficulty.

A few years afterward, under the stress of circumstances, the institution and franchise became the property of its founder, who disposed of it in 1854 to a syndicate of individuals connected with the Pennsylvania Medical College. It was finally closed in 1859.

Medical intolerance in Philadelphia at this period was carried to the extreme of persecution. No religious person or corporation claiming infallibility for the Church ever went farther. Whatever the extent of learning, professional merit or moral excellence, it weighed nothing in the balance. Even the Woman's College, although endeavors were put forth almost to abject servility in order to win favorable consideration, was included, nevertheless, under the same ban of medical proscription. In 1860, the Pennsylvania Medical Association adopted resolutions disapproving of the admission of women to the study

and practice of medicine, and declared those physicians who gave them professional recognition to be virtually quacks.

The case of the Eclectic Medical College of Pennsylvania was, therefore, by no means exceptional. It received the like supercilious treatment which had been meted out to its contemporaries. The tendency of such action is often to direct the attention of calm and thoughtful persons to the motives instigating it, and to the sentiments of those who are impugned. It was perfectly natural, therefore, that a man like Dr. McClintock, himself proscribed and compelled to encounter persecution and obloquy, should be disposed to consider favorably the doctrines and procedures of the Eclectic School. The result of his investigation was conviction. He at once gave up the use of mercury, arsenic, antimony, and other objectionable drugs, and adopted the agents employed by Reformed practitioners. Having resigned the office of resident physician in the Blockley Hospital, he accepted the professorship of Surgery in the Eclectic Medical College of Pennsylvania.

In his Introductory Address, he declared that he had maintained Eclectic doctrines as early as 1842, while president of the medical college at Castleton. There had been classes among the Allopathists, he affirmed, equivalent to sects in medicine ; and it must be acknowledged of the Homœopathists that great benefit had resulted from their labors. Each of these parties claimed to be right and superior to the other, but they were alike exclusive, tyrannical and proscriptive. He now chose to array himself with the Eclectics. They were not bound to the dogma of any school, and their teachers insisted upon an inti-

mate acquaintance with all the subjects which constitute medical knowledge—taking the good from all sources and casting the bad away.

The winter term of 1859–60 began as usual at the College building, at the corner of Sixth and Callowhill streets. The Faculty was now composed of Dr. Paine, the dean, and Doctors Calkins, McClintock, Bohannan, Sites and Hollembaek. A spring term was also arranged and duly advertised in the *Eclectic Medical Journal* of Philadelphia, to begin on the fourth day of March, 1868, with the same instructors. So far as was announced to the public, the relations between the several members of the Faculty were cordial. "With the present organization and enlarged facilities for instruction," Dr. Paine declared in an editorial article, "there is no Medical College in America with a stronger corps of teachers."

These arrangements, however, were little more than a prelude to another departure. Dr. Bohannan resigned, went home to Virginia, and became afterward a general in the Confederate army. Dr. Calkins, in turn, was also dissatisfied with his environments, and accepted a chair in the Penn Medical College. He presently renounced all connection with the Eclectic and Reformed Schools of Medicine, and was for some years a professor in the medical department of the University of Vermont at Burlington. Dr. McClintock, however, was most aggressive of them all. He was a man of liberal attainments, a classical scholar, with a superior social and professional standing, and did not find himself in harmony with several of his colleagues. A rupture of some kind was inevitable.

Doctors Paine and McClintock began negotiations

in December with Mr. Joseph S. Fisher, the president of the American College of Medicine in Philadelphia. The institution had been incorporated in 1853, on the application of several individuals who were not in accord with the Eclectic Medical College. They had strenuously discarded Eclectic affiliations, professing only to be "American Medical Reformers." Several of them, indeed, had affiliated with the Reform movement, which had been set on foot in New York in 1851 and proposed the abrogating of denominational distinctions.* The American College had held but a single term of lectures in 1853, and then suspended for want of financial support. It was agreed to appoint a Faculty and revive the enterprise. A special act was procured from the General Assembly on the fifteenth of February, to change the name of the institution by adding the title of "The Eclectic Medical College of Philadelphia." The building on Race-street, known as the Friends' Literary Institute, was engaged for the new enterprise, and the students who adhered to the two seceding professors received their degrees on the 18th day of the same month.†

The controversy threatened for a time to wreck the institution at the corner of Callowhill street Its supporters, however, determined resolutely to maintain their ground. Dr. W. C. Davidson was appointed to succeed Dr. Paine, and upon his withdrawal, a few weeks later, to accept a chair in the new College, Dr. John Fondey took the place. Dr.

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* See page 586.

† The number thus graduated was twenty-one. Among them were Doctors Harvey E. Bowles, now of Hammonton, New Jersey: the late James P. Cowles of Hartford, Connecticut; J. T. Dickerson, now of Brighton, Illinois; B. S. Manly, J. L. Thomas, O. D. Paine. Dr. Bowles is remembered by the author as having been his instructor in the art of setting type.

Joseph Sites became dean of the Faculty. He was a man of influence, having been repeatedly elected to the City Council of Philadelphia, and serving afterward as a Trustee and President of Girard College. Dr. William F. Smith, a Trustee of the American College, and claiming to own its charter, now became a member of the Faculty, and, also, Dr. Joseph P. Fitler, also of some note in political circles, Doctors John Buchanan, J. C. Everson and Hamilton McDowell.

The next few years were characterized by sharp conflict between the two colleges. Dr. Hollembaek established the *Eclectic Medical Journal* of Pennsylvania, and vigorously assailed his former associates for lack of faith, unprofessional advertising, and with carrying on a medical school for which they had no valid charter. Dr. Buchanan succeeding to the editorial chair, showed himself a master of coarse and vituperative language as well as of the art of exaggeration. Dr. Paine refrained from often replying publicly; probably from the consciousness that the general public seldom takes interest in the private griefs or personal wrongs of individuals.

At this time the other educational institutions of the Reformed School in the Northern States had generally closed their doors, while those of the South were suspended from the conditions produced by the Civil War. The Eclectic Medical College of Pennsylvania had thus become the chief occupant of the field. The Eclectic Medical Association of Pennsylvania first organized in 1841, met steadily under its auspices at Philadelphia, and the Eclectic Medical Institute at Cincinnati maintained relations with it for years of an amicable character. The Eclectic Medical Societies of the United States and Canada

generally published their proceedings in its official journal, and by contributing of papers and other testimonials of regard, gave it their countenance and support. The infant Eclectic Medical Society of the State of New York invited its professors to participate in the proceedings, and admitted five of them to membership.* They took advantage of the opportunity to set forth their version of the controversy in Philadelphia, denying the legality of the action of Dr. Paine and his associates, and obtained a vote of censure against the rival college.†

The most vigorous efforts were put forth to sustain. the enterprise. A chair of military surgery was established, and ably filled. It was then the practice to hold two terms each year, and students beginning attendance in autumn often received their degree the next summer.‡ This practice was very general in

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* Doctors Hollembaek, Sites, Smith, Clark and John Buchanan.

† Dr. W. F. Smith offered the following preamble and resolution, which were adopted by a unanimous vote:

"*Whereas*, The Eclectic Medical Society of the State of New York has taken a high stand in Medical Reform, which may lead to a National organization,

"*Therefore Resolved*, That this Society will not recognize or countenance any institution or college unless it is legally chartered by the State in which it is located."—*Adopted June* 8, 1864.

‡ The number of graduates from session to session, indicated a moderate degree of prosperity. Eight received degrees in 1863; nineteen at the winter term, and twenty-nine at the spring term in 1864; thirty-one at the winter term and nineteen at the spring term in 1865; thirty-six at the winter term and eighteen at the spring term in 1866; thirty-three at the winter term and twenty-four at the spring term in 1867. Among the graduates thus enumerated were Doctors George W. Brown, Maurice N. Miller, Judah Isaacs, Henry Rittenhouse, Luke D. Broughton, Thomas Airey of England, John W. Thrailkill, A. G. Stillman, George A. Bagley, J Watson King, George S. Everts, J. A. Burt, David Paul, Joseph Fisher, Roscoe G. Milliken, A. E. Colerick, Marshall H. Holmes, W. W. Watson, George H. Day, Isaac Shoemaker, William Bell, Stephen Clark, J. P. Worrell, C. F. Dumas, William Titus, B. P Backus, Henry James, Geo. C. Washburn, William Wiard, Lewis P. Grover, Francis L. Gerald, G. W. Keith, A. Shattuck, Edgar Cole, C. Howard Moore, Eli. G. Jones, M. B. Kenney, Francis L. Simmons, B. N. Bedortha, Dr. W. Harshberger, J. B. McKilveen, J. J. Siggins,

medical colleges till 1880. The advantages were supplemented by an Alumni Association which held stated sessions in Philadelphia, and was instructed by the professors of the college.

The institution had been compelled from the first to depend upon the personal efforts and enthusiasm of its friends and Faculty, unaided by donations from the public treasury or liberal endowments from wealthy sympathizers. Often the instructors received no remuneration, or merely a nominal one, and several of them after a brief term of service, found it necessary to resign their professorship in order to find lucrative employment elsewhere. This was no matter of reproach, but rather of commendation. Among the professors in this category were several of superior merit. We name Dr. J. P. Fitler, John Watson, Emil Querner, Robert Hamilton, J. V. Lewis, George H. Day, Judah Isaacs, George H. Hutchings, as men of worth and honorable distinction.

By this time, however, the management of the College exhibited irrefragable evidence of disreputable procedures, and a disposition to impose without scruple upon the confidence of the public. In the summer of 1864, a misleading statement was published in the name of the Board of Trustees, announcing in fulsome and inflated terms, the extraordinary success of the institution and the prosperous career now to be expected.

H. N. Rogers, A. J. Haile, J. B. Gallup, W. M. Silvernail, Frank L. Burr, George Garland, Ozias Ellerson, Thomas Butterfield of England.

In the list of Honorary Graduates were reported the names of B. Keith, W. T. Branstrup, A. W. Sidney, J. T. Burdick, H. A. Sweet, Horatio E. Firth, Dennis E. Smith, Thomas Simmons, James Day, W. H. Bowlsby, Matthew Hale Smith, James L. Proper, James Wilson.

Yet, in 1864, the Board of Trustees published the extraordinary statement that since 1850, the number of matriculants had been 1464, and graduates, 873.

"The friends of the Eclectic cause," the *Report* declares, "have nobly responded to our endeavors to push the Reform System of Practice, so much that we have been enabled to endow the College. We have received in all one hundred thousand dollars, and invested it in United States bonds. This sum will realize the respective professors a thousand a year. In consequence of this endowment, the Faculty will give free tickets to attend each course of lectures, *to fifty students* only, on payment of the matriculation fee [twenty dollars] each session. It is also an intention, at an early date, to secure an eligible site, and build a most magnificent college. The funds for this purpose are already in the hands of the Treasurer."

The later publications of the College make no mention of the endowment or resources of the institution. It was doubtless a subterfuge to attract students. It served the purpose of obtaining the formal sanction of the Eclectic Medical Society of New York, and was the prelude to a new policy which led inevitably to dishonor. The fees for tuition were reduced to an inconsiderable sum, and the degrees were conferred thenceforward on individuals at home and in Europe, without any attendance at lectures, or proficiency in medical scholarship. In 1867, the General Assembly of Pennsylvania incorporated the American University of Philadelphia, which existed as an associate institution, conferring literary and scientific degrees.*

At the annual meeting of the Eclectic Medical Society of New York, in 1868, the matter was con-

* The conferring of medical and academic degrees had been a common practice in Great Britain and Europe, as well as in America. A president of the New York County Medical Society, some sixty years ago, declared in his annual address that it had become a trade to manufacture diplomas, and that they were sold about the country like the merchandise of an itinerant pedler. This was before a Homœopathic or Eclectic College existed to take part in the business. It is hardly probable that many institutions can be screened from the imputation.

sidered, and the following resolution, offered by Dr. Robert Hamilton, adopted without dissent:

Resolved, That the Eclectic Medical Society of the State of New York protest most emphatically against the practice of certain so-called medical colleges of this country of conferring the Degree of Doctor of Medicine upon persons who have neither attended full courses of lectures, nor otherwise acquired a suitable knowledge of medical science; and that we utterly condemn this wicked bartering of medical diplomas, and that this Society will refuse to acknowledge the validity of said diplomas.

The next year the Society reiterated these declarations, and a Committee was appointed to investigate the matter. A full report was made setting forth the facts, and resolutions were adopted denouncing the traffic in medical degrees, refusing to recognize the Eclectic Medical College of Pennsylvania as a medical college at all, and expelling from membership the four professors enrolled.

The General Assembly also passed a law inhibiting the granting of academic degrees for pecuniary consideration, and making it a misdemeanor to sign a spurious diploma From this time the Eclectic Medical College of Pennsylvania was no more recognized by the American Eclectic School of Practice.

Meanwhile, the new College on Race street entered upon a career which promised to realize the warmest hopes of its friends. Dr. Paine, the dean, was a man of great energy and ability as a financier, and was awake to the importance of a high professional standard. His new associates ranked among the ablest teachers in the United States, and several of them sustained a high reputation for scholarly attainments. The Announcements declared the purpose of

the Board of Trustees,* "to raise up a National College, open to every member of the profession, without distinction of sect or party." Adhering for the time to the name of *Eclectic*, they deprecated the want of thorough instruction at medical colleges, and especially the existence of teachers lacking in general knowledge and ignorant of every principle of Eclectic Medicine and Surgery.

The Faculty in 1860 comprised Doctors Paine, McClintock, Gauntt and Charles H. Cleaveland, formerly of the Eclectic Medical Institute and Eclectic College of Medicine in Cincinnati. Dr. Elbridge G. Dalton, a professor of the Greek and Hebrew languages, accepted the chair of Physiology, and proved a most desirable acquisition. The practice had not then become general to advertise a group of professors who were instructors in little other respect than the title, holding the places nominally for the sake of thereby gaining public attention.

The Civil War was the occasion of important changes in the institutions of learning at Philadelphia. The students were largely from the Southern States. and repaired home to take part in the great struggle, The class-rooms of the Pennsylvania Medical College were almost entirely deserted. Its building on Ninth street was considered the most complete and elegant structure of the kind in America. It had been erected at a cost of about fifty thousand dollars. The Trustees had purchased the franchises of the Philadephia Medical College and united it with their institution, and now the professors were lecturing to empty seats,

* Among the members of this Board were the Hon. John S. Prettyman, M. D., of Milford, Delaware ; William S. Merrell, the Eclectic Druggist of Cincinnati; the Rev. Dr. McClintock, Dr. T S. Perkins. Only two members of the Faculty were Trustees.

with little hope of soon beholding them again filled. Early in 1862, Dr. Paine and his associates began negotiations for the purchase of the property, and after long delay the transfer was effected in October of the next year.* The next session of the Eclectic Medical College of Philadelphia commenced at the new homestead with great enthusiasm. Perhaps the expectations of its friends had never been raised to so high a pitch; and to outward seeming, they were abundantly warranted.

The Faculty was enlarged to nine Professors. Dr. A. R. Thomas, formerly of the Syracuse Medical College and Penn Medical University, and since that dean of the Hahnemann Medical College, was appointed to the Chair of Obstetrics. Dr. Homer J. Doucet, a graduate of Union College and an accomplished teacher, Dr. J. Milton Sanders, formerly of the Eclectic Medical Institute, Dr. Abraham Livezey, and Dr. Lincoln Oldshue, of Pittsburg, were also made professors.

The reputation of the institution was admirably sustained by its graduates. Many of these achieved a high rank as physicians,† and several received

* Dr. John Buchanan asserted in the journal, of which he was then editor, that the three charters, which Dr. Paine professed to have purchased, were still the property of other persons; that of the American College belonging to Dr. William F. Smith, that of the Philadelphia College to Dr. Rand, and that of the Gettysburg branch of the Pennsylvania College to Dr. F. G. Smith—all of Philadelphia. As none of them attempted to estop his proceedings, it is hardly probable that he was acting without due authority.

† We will name in this number several who became prominent in the Eclectic school—some as teachers, and others as active practitioners. In the class of 1860–61, were Doctors E. G. Dalton, William B. Jones, T. S. Perkins and N B. Wolff; in 1861–62, Doctors William S. Merrell, *honoris causâ*; Solomon F. Wehr, Jacob Van Valkenberg, P. A. Allen, M. F. Price, J. A. Hawley and W. B. Steere; in 1862–63, Doctors William Hargreaves, H. J. Doucet, Edgar A. Bassett, R. Van Naten; in 1863–64, Doctors Henry A. Bolles, Francis M. Reasner, George H. Day, D. A. Loomis, Cicero M. Ewing, Corydon C. Johnson; in 1864–65, Doctors Henry K. Stratford, John D. Young, J. L. Kilgore, John R. Borland, R. B. Weaver

appointments in the military and naval service of the United States. Their training under Dr. McClintock had admirably fitted them for these positions, and the public authorities several times rendered them honorable acknowledgment.

In 1864 Dr. Paine perfected negotiations with the Penn Medical University for a union of the two institutions. Each retained its own corporate existence, and the announcement of lectures was made in the joint name of both. The Faculties were united, Doctors L. W. Buffington, Charles A. Leech and Joseph Longshore being appointed adjunct professors of the Eclectic College.* The ensuing winter, however, an act was procured from the General Assembly changing the corporate name of the college to the title of the "*Philadelphia University of Medicine and Surgery.*"

The new designation was significant in several ways. It was no less than the laying aside of the former name of Eclectic, and the attempt was made to substitute for it the appellation of "*The New School of Medicine.*" Several of the professors had not graduated in Eclectic Colleges, and to them the change was by no means objectionable. The others saw a possibility of gaining professional recognition in the medical circles from which they had been excluded. Dr. Paine himself was facile in the matter, and readily set himself to work to find arguments for the

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Harrison A. Tucker, J. Stolz, J. D. Wheeler, A. C. Taylor; in 1865, Doctors Henry Beam Piper, James M. Louther, Charles E. Heaton, J. C. Michener, Ray V. Pierce, W. C. Coburn.

* In 1874, lectures were resumed by Dr. Edwin D. Buckman and associate professors, in the name of the Penn Medical University, and were continued till 1881. The Institution at this time was described as non-partisan, and its graduates affiliated with different schools of practice.

step. He declared that the peculiar significance of the name had passed away. Most of the improvements and essential changes introduced by Medical Reformers had been adopted by the Old-School profession, carefully withholding from them due credit, and thus leaving them in the attitude of outsiders. Many Eclectic and Homœopathic practitioners had observed this, and avoided the use of a distinctive appellation in announcing themselves, passing simply as physicians.

Besides this, the Medical Colleges, both of the Eclectics and Homœopathists, Dr. Paine affirmed, had been unsuccessful enterprises. The Eclectic Medical Institute, at Cincinnati, had once numbered three hundred matriculants at each session; but for the last few years, the number of actual students attending each course of lectures hardly exceeded a dozen. All the other Eclectic Schools—in New York, Boston, Worcester, Memphis, St. Louis, and other places—had failed altogether for want of patronage. Even the Eclectic Medical College of Philadelphia hardly exceeded a hundred students each session.*

A reason, however, which was more likely to add force to the argument, was the preference given by graduates to the diploma of the Penn Medical University to that of the Eclectic College. After the two institutions were united, they were allowed their choice, and only ten accepted the Eclectic degree. The others pleaded that if they received a diploma without a party name, they could practice medicine

* The *Eclectic Medical Journal* of Cincinnati, alluding to this matter, said: "This is rather a sorry showing and is to be regretted. Still it may be readily accounted for; as Paine has forsaken Eclecticism, considering it discreditable, and the other school is not organized on a basis to succeed."

as they thought proper, and at the same time escape the *opprobrium medicorum*, the odium of being classed as irregular. Graduates of Homœopathic preferences pleaded the same thing. Yet while urging this as justifying the new departure, he declared medicine an Eclectic science; and that unless we have the independence to discard false teachings, and to gather up those principles which are true, we cannot expect to keep pace with the various sciences of the day.

"*Parting with the venerable name of Eclectic*," Dr. Paine added, "we feel some sentiments of a sorrowful nature moving our hearts. But these feelings are mitigated by the reflection that if we are necessitated to part from the *name* Eclectic, we still retain its *spirit* in our school. We feel that no change of circumstances could induce us to forsake the glorious principles of true Eclecticism; for we believe that they have derived their foundation from the ever-living laws of truth."

CHAPTER XIV.

IMPORTANT EVENTS IN THE ECLECTIC SCHOOL.

SEVENTY years ago, Rafinesque described Eclectic physicians as those who select and adopt in practice whatever is beneficial, and who change their prescriptions according to emergencies and acquired knowledge. Such, therefore, were not to be held to any exclusive dogmas, however plausible and imposing. Their principles would be fixed and unchanging, but their methods and procedures must always be modifiable as new discoveries might require. Our perceptions of truth are always relative, and it becomes us accordingly to give a hospitable reception to every new opinion which may be likely to bring some better procedure to our notice. It was an apostolic direction to prove every thing, and keep fast hold of the good; and this is the aim and scope of the American Reformed School of Medicine.

THE NEW DEPARTURE IN PHARMACY.

Nevertheless, with all the advantages enjoyed by Botanic and Eclectic physicians in the department of Medical practice, from the manifest superiority of their remedial procedures, their existence as a distinct school was its permanency to their achievement in the field of pharmacy. For a long time the vegetable

medicines which they had introduced and employed with salutary results, such as other practitioners had been unable to accomplish, were prepared after the most primitive methods. In these forms, the remedies, thus simple in the mode of application, were probably more efficacious for cure. This, it will be remembered, was the judgment of Rafinesque. Experience, however, demonstrated the necessity, or at least, the advisability of a more thorough manipulation. It could not be denied that the agents employed from the vegetable kingdom, while superior to the others in use, were crude and bulky, as well as often distasteful and repulsive beyond the power of sensitive patients to endure.

Under this condition of facts, it was morally certain that the New Practice of Medicine, notwithstanding its many merits, would hardly become general or popular. It was likely to be circumscribed to the rural and humbler population, to the "plain people," and to be virtually precluded from a standing with the cultured, the wealthy and fashionable. Indeed, Homœopathy coming from Europe with practitioners liberally educated, with a milder dosage and ready flexibility in remedial procedures, was in better plight to earn favor in those circles, debarring its American competitor from that opportunity so essential to its prosperity.

This necessity for an improved pharmacy had long been perceived by the more intelligent practitioners of the Botanic schools. As early as 1835, Dr. Isaac Jacobs, of Bangor, in Maine, had become distinguished for his skillfulness in expressing the juices from medicinal plants. Rademacher, the great German Reformer, employed a similar method with great

advantage. In this way it was practicable to administer medicine in smaller doses, and yet with greater efficacy. Dr. Jacobs was very enthusiastic over his success, declaring his confidence that the Botanic practice would soon supersede that of the Old School, as well as Homœopathy and the Eclectics.

Some years later, Mr. B. Keith, of New Hampshire, engaged in the manufacture of what he denominated "concentrated remedies." His preparations met with much favor among Botanic physicians in the Eastern States. He afterward removed to the city of New York, in order to extend his business. He encountered violent opposition, both from practitioners and apothecaries of the dominant school, and from many of the Reformed practitioners. Writers in the *College Journal*, at Cincinnati, decried his preparations as a secret manufacture, inert, impure and adulterated. Dr. Grover Coe, ex-president of the National Eclectic Medical Association, being employed in his laboratory, received also a share of the adverse criticism. Nevertheless, the business became very prosperous and lucrative; and presently the proprietor dropped all relations with the Reformed and Eclectic schools.

WILLIAM S. MERRELL.

The honor and distinction of creating and establishing the new pharmacy, which has assumed its present permanency to the American Eclectic School of Medicine, belong by indisputable right to the late William S. Merrell, of Cincinnati.

The Eclectic Medical Institute had just been organized, and its two prominent founders, Doctors Beach and Morrow, were awake to the urgent need for a

better mode of manipulating the new remedies. Their medicines were from the vegetable kingdom and had been proved superior, but the inconvenient forms in which they were administered operated as an obstacle almost invincible to their adoption. It was resolved to find a man able and willing to undertake the work of improving them, in order to render them more acceptable. Their choice was William S. Merrell. He was an apothecary of signal ability, well educated, fond of research, unselfish and deeply interested in various enterprises of public benefit. He was in every way fitted by personal character and early experience to undertake this as a life-work.

William Stanley Merrell was a native of Oneida county, in New York, and after passing through a singular variety of trying adventures, became a student at Hamilton College, receiving his degree in the year 1823. He then made his way westward, and became principal of the Tuscumbia Female Academy in Alabama. Here he remained three years, in which time the school flourished and attained a high degree of popularity. Returning to Cincinnati, he agreed to accept the position of professor of chemistry in a medical college then in contemplation. The plan did not succeed, and he began the study of medicine, engaging at the same time in the business of apothecary. He won a superior reputation in this enterprise and formed a partnership with a brother, which proved very advantageous. He engaged, however, in another venturous undertaking which proved unfortunate, and finally, some years later, he resumed the business of apothecary.

At this period, the proposition of Dr. Morrow to engage in the preparation of Eclectic medicines was

received. He was to remove his business to the College building, and was assured that all the Botanic practitioners, so far as represented by the school at Cincinnati, would become his patrons. The work suited his taste, and he accepted the proposition. Thus he became identified with the Eclectic School, and the Father of the American Pharmacy.

He directly, as by accident, made the discovery of resins and resinoid principles in medicinal plants, in which were contained the principal active properties. In 1847, he found the gum or resin of the mandrake, and, after experimenting with it himself, submitted it to the professors of the Eclectic Medical Institute.* Dr. Morrow was enthusiastic over the new medicine. It met a necessity which he had long felt to exist, an efficacious drug in minute dose. From the first however it was decried by writers of the dominant school as being utterly unfit for medicinal purposes. This, however, was soon disproved, and "podophyllin" came into general use. Then the common makeshift was employed, to affirm that it had been already discovered and was introduced from them.

Merrell pushed his experiments with renewed zeal, and in 1848, obtained in quick succession the resinoid principles of the Macrotrys or Cimicifuga, the Leptandra or Culver's physic, the Iris versicolor, and others. Adopting an etymology which had already been suggested, he named his new medicines podophylline, macrotine, leptandrin, iridin. Afterward, when manipulating the blood-root and yellow pucoon, he obtained alkaloid principles analogous to morphia

* He learned afterward, and promptly acknowledged, that several others had made the same discovery; nevertheless, he was the first who brought it into use as a medicinal agent.

and quinia. These he named accordingly, sanguinaria and hydrastia. He continued his efforts in this direction, and succeeded in obtaining educts from the principal medicinal plants of the vegetable Materia Medica.

These discoveries were received by the Botanic and Reformed physicians with a joyful welcome. They imparted new energy to the Eclectic cause. The practitioners now felt confident that the trite designation of "unscientific" could no longer be applied. They could have a pharmacopœia equal in merit and erudition to that of their adversaries. The new remedies were eagerly procured, and others engaged in their manufacture.* The results were duly reported to the medical journals. New zeal was enkindled to organize medical societies in which to compare observations and discuss the new advances in the Reformed Practice. Since the repeal of the obnoxious medical legislation that had made them all culprits, liable to fine and imprisonment, there had nothing occurred to fire the heart of Eclectic physicians with such glowing hope.

ESSENTIAL TINCTURES.

Mr. Merrell made copious notes of his observations and discoveries, many of which he explained in communication to the various medical and pharmaceutic journals. A complete outline of them, however, was given by him in King's *American Eclectic Dispensatory*, in 1858. He there propounded as a law of organic

* The term "positive medicine" was invented at this time to describe the quality of these remedies. The mania for discovering "concentrated remedies" raged for some years with great violence, but many of the preparations were of little value, and soon fell into disuse.

chemistry, having few exceptions, that pure alcohol in its solvent powers, discriminates between those elements in vegetable and animal bodies, which are medicinal or poisonous, and those which are nutritive or inert. Thus albumen, gluten, gum, non-medicinal oils, fat and other analogous substances are insoluble; while the alkaloids, resinoids, resins, acids, oils which are medicinal, musk, castor, the various poisons of serpents and insects, the pus of ulcers, and other secretions, readily dissolve in that fluid.

Following out this hypothesis, he proposed a new series of fluid medicines, very concentrated, definite and durable, which he believed would be superior in most cases to other pharmaceutic preparations. These solutions or tinctures are certain to retain fully all the volatile elements of the plants or materials from which which they are prepared; the resinoids and oleo-resinous principles are all retained and held in permanent solution; the tinctures will not only be clear and elegant, but not liable to fermentation or decomposition, and thus unaffected by time or temperature. They may be made of definite and uniform strength, or nearly so, although the materials used may not be uniformly of prime quality.

"These tinctures, containing as they do all the virtues of the plant separated from extraneous matter, and being of definite and known strength, may readily be diluted by alcohol into *officinal tinctures*, or be added to simple syrup to form beautiful and efficient *medicinal syrups*, or be evaporated to the fibular consistence, and thus form most permanent and reliable *alcoholic extracts*."

In order that the new preparations might be distinguished from others of different quality, Mr.

Merrell gave them the designation of "*Essential Tinctures.*" *

Though William S. Merrell was in no sense ambitious for honor except that of doing well and thoroughly the work at which he was engaged, he was by no means unnoticed. He was elected to the City Council of Cincinnati and held places of distinction in the church of which he was a member. In 1861, he was chosen a Trustee in the American College of Medicine in Philadelphia, and at the next annual commencement received from it the honorary degree of Doctor of Medicine. One or two other medical colleges conferred similar testimonials. He was also for many years a trustee and president of the Eclectic Medical Institute at Cincinnati.

Few of the present generation realize how the genius of William S. Merrell stamped itself upon the theory and practice of pharmacy. Though his work may not be generally known, or even acknowledged when known, by many teachers and practitioners, it is nevertheless interwoven with the web and woof of modern pharmacy; for when he began it, the pharmacy of our American Materia Medica was a new and unexplored field. He was diligent and conscientious; he risked his private fortune to make sure of his operations, and his success enured not merely to his

* In 1870, the National Eclectic Medical Association directed the appointment of a committee to prepare and report a National Eclectic Pharmacopœia The secretary, Dr. Robert A. Gunn, was further authorized to copyright the titlepage The matter, however, remained in desuetude till 1878, when a committee was appointed, consisting of Doctors Albert Merrell, S. B. Munn, C. E. Miles, F. J. Lock and A. L. Clark to prepare a plan for the work. Dr. Merrell reported the plan two years later, and was authorized to take the copyright in his own name. The work was accordingly completed and published in 1883, and duly accepted by resolution as being under the direction and approval of the Association. In this work Dr. Merrell adopts the designation of "Normal Tinctures," indicating by it a standard strength in the preparations.

own emolument, but to the general benefit. He always held fast his integrity.

Dr. Merrell died at Cincinnati, September 4, 1880, in his eighty-third year.

ECLECTIC MEDICAL INSTITUTE—ITS CHANGES.

The two rival college enterprises at Cincinnati had united, and the Eclectic Medical Institute began its new career with a loud note of exultation. The two journals had also been consolidated, with Doctors Newton and Hart as editors. It was announced that the class numbered "more than is now attending all the other schools in the city." There were forty-four graduates at the close of the winter term, and thirty-one in the month of May following.*

The war of 1861, momentous in the history of the American Republic, was by no means a prosperous period for Medical Colleges. The class in the Eclectic Medical Institute diminished to smaller numbers, only twenty-nine graduating at the winter session,† and eight in the spring. Nevertheless, the editorial articles of the *Eclectic Medical Journal* betrayed no sign of despondency, yet they contained the significant admission that a jealous feeling existed among many, that the men connected with the Institute wished to set themselves up for leaders.

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* The following well known physicians were among the number, namely: Doctors John W. Pruitt, of Arkansas; Edward E. Spencer, of Massachusetts; John B. Shultz, of Indiana; Milton M. Fenner, and John G. Fross, of Michigan. Dr. Pruitt was appointed a surgeon in the Confederate army, sustaining a rigid examination, and was the pioneer in establishing the Eclectic School of Medicine in Arkansas.

† Doctors Anson L. Clark and Henry K. Whitford, founders of the Bennett College, at Chicago, George H. Field, the founder of the St. Louis Eclectic Medical College, and Abner Thorp, of Cincinnati, were of the number.

Dr. Newton disavowed emphatically the existence of such a spirit. "We are certain," said he, "that no such object is an incentive to action with those who have been or are now connected with the Eclectic Medical Institute." Nevertheless, there was a cloud overhead. The Civil War had begun and impeded all business in the country. At the end of six months the *Eclectic Medical Journal* was suspended for want of support.

A radical change was made in the management of the affairs of the College. It had been a joint-stock company and subjected to the various contingencies and embarrassments incident to such enterprises. This arrangement was terminated, and the Eclectic Medical Institute became the property of Doctor Scudder. He was a man of excellent financial ability, resolute of purpose, and energetic in his efforts for success in undertakings. Doctors King, Howe, Garrison, Judge and Freeman were retained as professors, forming a coterie of instructors certain to assure the reputation of the institution for thorough instruction and careful training in the varied duties of the practitioner. Dr. Scudder had been a partner of Dr. Newton, but now dissolved that relation,* and gave his attention more exclusively to the management of the College. The *Eclectic Medical Journal* was now revived, and has been published regularly till the present time as the official organ of the Institute and the exponent of the sentiments of its proprietor.

There was a strong attempt at this period to put an end to the existence of the College as well as of

* Dr. R. S. Newton removed to New York, and Dr. L. E. Jones was no longer retained in the Faculty.

the Eclectic School. The Examining Boards, acting as umpires, refused to accept any Eclectic for the public service. The classes were small. In 1863, the graduates received their degrees at the rooms of the Institute without any public display. They were conferred by William S. Merrell, the vice-president of the corporation, upon thirteen students at the close of the winter session,* and nine at the spring term. The next year, however, exhibited a greater degree of prosperity, and the College has since continued in a successful career. Two sessions have been held every year to the present time; the classes have been large, and the graduates have generally become physicians of superior merit and ability.†

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* Doctor George Covert, of Wisconsin, late president of the National Eclectic Medical Association, W. M. Johnson, of Illinois, and John M. Powell, of Ohio, were among this number. In his address to the class, Dr. Merrell made this noteworthy utterance:

"There is another, perhaps a higher qualification that must be brought into use. It is an *intuition*—a reception of truth not derived from outward teachings. This is experienced by men in every vocation, but by none in a higher degree than by the physician when exercising his profession in the love of it. I hold it to be an influx from the inner and higher life. Explain it as you will, suggestions or impressions come into the mind when anxiously desiring the truth, and placing themselves in a passive or recipient condition, which it cannot trace to any instructions previously received. It is owing to this that there have always been many doctors, so called, who acquire no little notoriety in curing diseases and often in their success shame the educated M. Ds. around them, who yet are entirely uneducated and know not the first rudiments of medical science."

† We will name several of those who have been more or less prominent in effort to maintain organized action, and to advance the Eclectic cause. Of graduates in 1864, John W. Thrailkill, Frederick J. Lock; in 1865, Wilson H. Davis, Noah Simmons, Ray V. Pierce, B. T. Gadd, Edwin H. Carter, David Surber, Phineas Sage, M. R. Teegarden, W. Hope Davis; in 1866, George C. Pitzer, Edwin Younkin, George W. Pickerill, J. H. Woodward, E. Blackman, W. B. Church, W. Molesworth, L. R. Brigham, William L. Tuttle; in 1867, C. Edwin Miles, Frank H. Kelley, Ira Van Camp, J. L. Hensley, John T. McLaughlin; in 1868, Philo B. Wright, Permetus D. Yost, Ellis J. Kirk, Joseph D. Peters, Josiah Arnold, B. H. Aylsworth; in 1869, Hiram C. Miller, Joseph A. Munk, Ansel M. Eidson, Nelson G. Smith, Samuel J. Smith.

ECLECTIC PHYSICIANS AND PUBLIC SERVICE.

At the beginning of the Civil War, in 1861, it was the invariable practice in many of the Northern States for the Examining Boards to reject all applications of Reform physicians for appointment as surgeons in the Federal Army. A Committee of the Medical Society in the District of Columbia, some years after, explained the reason for such exclusion. "In Episcopal religions, the Bishop gives the formula, and the minister who disputes or practically differs is disrobed ; so the only governing body in medicine in this country is the American Medical Association, the representative organ of the whole regular profession." This was confidently regarded as the opportunity to put this prelatic authority in force. Compared to that consideration, the health and welfare of the soldiers made but a subordinate matter, and were so treated.* It was confidently declared that "exclusion from positions in the Army would kill off Eclecticism, and every species of quackery."

Nevertheless, they were unable to justify this procedure by plausible pretexts of unfitness or other disqualification. They rejected experienced physicians from the motive of pure partisanship. As a sequence, the places, very many of them, were conferred upon physicians who had been unable to make a livelihood by their profession, and upon men fresh from College, often where the terms had been

* In the Confederate service such discrimination was not always made. Eclectic and Botanic physicians were often accepted, and by their superior skill and professional talent, reflected honor upon themselves, and upon the School of Medicine to which they belonged.

shortened in order to enable them to obtain appointment.*

As might be expected, flagrant inefficiency as well as insufficiency characterized this branch of the military service. In 1862, when the war was prosecuted more actively, incompetency and neglect of duty became notorious. The wounded in battle were left uncared for sometimes for two and even three days. There was often more danger incurred from the surgeon than from the bullets of the foe.

The attention of Congress was directed to the exigency, and the Medical Department of the Army reörganized. A new Surgeon-General, Dr. William A. Hammond, was appointed, at the desire of General McClellan, and the number of surgeons increased. Besides this, the Governors of the States also provided volunteer surgeons for emergencies, who agreed to bestow their services without remuneration.

Medical partisanship was to some extent disregarded. In Pennsylvania, for example, physicians from the two Eclectic Medical Colleges were employed whenever found competent. Governor Oliver P. Morton, always prompt and in the advance, sent more than a hundred surgeons to the regiments from Indiana, selecting them impartially from the different Schools of Medicine. Governor Yates, of Illinois, was likewise active and diligent. Governor Tod, of Ohio, from the first acted solely in behalf of the dominant School. The Board for examination of applicants rejected unqualifiedly every candidate for

* In Connecticut, several Eclectic physicians offered their services to the Governor and were accepted by him. The Examining Board rejected them, and a special term was held of the Medical Department of Yale College, at which a class was hastily graduated to fill the positions.

appointment who was not in accord with Old Physic. The General Assembly attempted to check this by a law forbidding any distinction to be made by the appointing power between graduates of the different Medical Colleges of Ohio. The Examining Board was also abolished. The Governor, however, appointed another. He had been authorized by the Legislature to secure the gratuitous services of surgeons and physicians, as in the other States, for the proper care of the volunteers from Ohio, their expenses to be defrayed from the Treasury. He, however, demanded instead that he should have authority to appoint sixty surgeons at a fixed salary. Thirty were granted, and he made choice of inexperienced men. Meanwhile, he appointed none of those who had offered their services, the Eclectics being rejected and others not willing to serve gratuitously for any considerable time.

Nevertheless, several hundred Eclectic and other heterodox physicians, did pass Examining Boards and receive appointments. They generally found it politic, however, to conceal their sentiments in regard to Therapeutics.

FAMOUS ORDER BY SURGEON-GENERAL HAMMOND.

A prodigious excitement was created throughout medical circles by an order of the Surgeon-General, issued on the fourth of May, in 1863. Dr. Hammond, observing from the reports of his subordinates that the use of mercury had, in innumerable cases, been attended by most baleful results, and remarking that the diseases prevalent in the Army might as well be treated without antimony as therewith, directed that those drugs should in future be struck from the

supply table and that no further requisitions for them should be approved.

The order was regarded by his professional associates as a virtual apostasy from medical orthodoxy, and a veritable scuttling of the ship in which they had sailed for three centuries following the days of Carpi and Basil Valentine. Their indignation was not concealed. They did not, however, depend simply upon a defense of their favorite drugs, but resorted, like the masters of the exorcised Pythonic maiden,* to a more insidious mode of attack. It had been an established usage, they pleaded, that all promotions in the medical service of the Government should take place in the order of rank. Doctor Hammond, however, had been appointed over colleagues who ranked above him. They demanded accordingly that he should be removed, and that the old order of promotion restored.

Dr. Hammond had exhibited a remarkable fitness for his position. He possessed superior administrative ability and capacity for organizing and executing his plans for the required improvement of the medical service. At his suggestion many of the colleges of the several schools established professorships of military surgery in order to fit their students to respond to the pressing exigencies of the time. All this, however, counted for little with his adversaries, so long as he had ventured to pass beyond the cordon that circumscribed the medical arena. Medical Societies adopted resolutions denouncing him, and an abortive attempt was made to procure his condemnation at the annual meeting of the American Medical Association. Finally, however, charges were

* *Acts of the Apos les*, xvi., 19-21.

instituted against him of malfeasance and dishonest practices. A court-martial was held and he was dismissed from office in May, 1864.

The belief, nevertheless, was very generally entertained, that this entire proceeding was corrupt and directed by personal malice, and with no adequate ground for the accusations. Several years later, the sentence was reversed, and Dr. Hammond indemnified. Under the new Surgeon-General, the famous "Order No. VI," was speedily revoked, and the interdicted drugs again included in the medical supplies for the Army. It was also directed that henceforth only graduated physicians from the "regular medical colleges," should be accepted as surgeons in the military service. It seems to have been supposed that this would be effectual in putting the Reform and Eclectic Schools of Medicine out of existence. At the time some nine-tenths of the practitioners of the United States had never graduated in Medicine in any institution, and in later years, of those who had come from the approved colleges, four-fifths were rejected at their official examination for deficient scholarship. Repeated endeavors have been made to procure the abrogation of this partisan distinction.

ECLECTIC MEDICAL ORGANIZATION.

Upon the cessation of persecution, incident upon the abrogation of the medical statutes in the several States of the American Union, there ensued among the Reform and Physio-Medical practitioners a very general feeling of indifference in regard to the maintaining of further concert of action. Their

Societies generally passed out of existence, and many of them abandoning their former exclusiveness, adopted the Eclectic procedures. Such was the case all the way from Maine to the Gulf of Mexico. Even the National Eclectic Medical Association, first organized in 1848, with which many physicians had affiliated who had belonged to opposing schools, held no meetings after 1857.

This indifference, however, did not prevail among all practitioners of the Reformed School. They had the brunt of conflict to sustain, and many of them were awake, more or less visibly to the vital importance of association, both for their own improvement as physicians, and for the common defense in case of attempts, such as were already in operation, for invasion of their rights.

The Ohio Eclectic Medical Society had been formed in 1853, and held its meetings regularly till the Civil War. The Missouri Valley Eclectic Medical Society organized in 1855, and the Union Society of Clermont county were also in successful operation at the same period. The Cincinnati Eclectic Medical Society was organized by members of the Faculty of the Institute and other physicians, in 1856, with Dr. William S. Latta as president, and Dr. Edwin Freeman as secretary. In 1860 its constitution was amended, a code of ethics adopted, and the name changed to that of the "Cincinnati Academy of Eclectic Medicine."

There was also in existence the Pennsylvania Eclectic Medical Association, organized in 1843, but its scope of activity extended little beyond that of the Eclectic Medical College of Pennsylvania. There was also the American Eclectic Medical Association, purporting to be a continuation of the Middle States

Reformed Medical Society, which was allied in an analogous manner to the rival institution.

The Eclectic Medical Association of Indiana, was organized at Indianapolis in 1857. The late Dr. William H. Kendrick was its president for several years. A Society was also begun the same season at Marshall, in Illinois, with Dr. Thomas A. Bland as secretary, but it was short-lived. The States in the valley of the Ohio and upper Mississippi were as yet sparsely populated, and it was difficult to form and sustain organizations. An attempt was made in Iowa, and proved futile.

The Connecticut Eclectic Medical Association had already been incorporated by the General Assembly with full authority to provide for the instruction of students in Medicine, and to license practitioners. The Massachusetts Eclectic Medical Society was organized in 1860, and duly incorporated by the Legislature. Both Societies were largely composed of members who had belonged to the Reform or Physopathic organizations that existed previously. An Eclectic medical society was also formed in the city of Boston. All these societies are still in vigorous operation.

The most systematic plan of organization was established in New York. There had been several state and local societies which continued in active existence for years,* some of them still in operation, but others of them had fallen to pieces. In 1863, the present Eclectic Medical Society of the State of New

* Page 482. The Genesee Reformed Medical Society had existed from an early period. In 1854 the Eclectic Medical Society of the County of Kings was organized and incorporated. In 1861 the name was changed to the "Brooklyn Academy of Eclectic Medicine," and in 1866 it became auxiliary to the State Society.

York was organized at Albany, and a union was effected soon afterward with the Reform Medical Society, in which there were already many Eclectic physicians, as well as Physio-Medical practitioners. In 1865 the new Society was incorporated by special act of the Legislature with power to establish auxiliary Societies which also should be corporate bodies. The Eclectic Medical College of the City of New York, was also incorporated at the same session.* Auxiliary Societies, sixteen in number, embracing the entire State except the northern counties, were quickly constituted. This example was followed with manifest advantage in subsequent years in other States where the physicians possessed the requisite *esprit de corps* and were sufficiently numerous.

Renewed zeal for coöperative action became widely diffused. The Societies of the Western States had been suffered to go out of existence, but new movements were set on foot for forming new ones in their place.† The Eclectic Medical Association of Indiana was thus organized at Indianapolis, in 1865. The Central Indiana Eclectic Medical Society was formed at Anderson, in December of the same year, with Dr. Milton Jay as president.

The Ohio State Eclectic Medical Association was organized at Cincinnati in May, and made choice of Dr. John King for president. The new State of West Virginia, joining with the northern counties of Ohio,

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* These enactments were procured by the author, who was then the legislative correspondent of *The Evening Post* at Albany. He encountered the resolute opposition of the Committee on Medical Colleges and Medical Societies, which consisted, as usual, of physicians hostile to the new practice.

† Doctors R. S. Newton, S. H. Potter, Joseph Adolphus, W. Molesworth, J. M. Templeton, James Anton, J. R. Duncan, E. M. Morehouse, were among the most active in these enterprises.

also formed a "Union Eclectic Medical Society." * Meanwhile a meeting was held at Anderson, in Ohio, and organized the "People's Western Reserve Medical Reform Society," electing Doctors J. M. Fry and James M. Hole as secretaries.

The Eclectic Medical Society of the State of Maine was organized the same year. There had been an active and very effective Botanic association in earlier years, which had been able to procure the repeal of the medical law, but almost directly afterward fell to pieces. Its practitioners presently adopted the procedures and affiliated with the Eclectic School. There were many energetic men in the new Society,† and it continued prosperous for many years.

The Vermont State Eclectic Medical Society was organized at Montpelier, in June, 1866. Its leading members were the late Doctors Templeton, G. H. Plumley, G. A. Bagley, Matthew McClearn, G. A. Gray. It still takes rank among the most active and effective societies.

The Iowa State Eclectic Medical Association was organized at DesMoines, in June, 1868. The late Dr. W. Molesworth was its president for several years; and among the principal members were Doctors Joseph R. Duncan, James A. Reid, E. H. Carter, J. Gadd. This Society has passed through many severe conflicts, but still holds its place among the most vigorous of the Eclectic Medical bodies.

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* This organization was not successful, and the West Virginia State Eclectic Medical Society was organized in 1870.

† The president was Dr. Horatio G. Newton, a nephew of the founder of the Worcester Medical Institution. Doctors George H. Day, Marshall H. Holmes, W. R. Wright, Noah R. Martin, Algernon Fossett, and T. G. Batchelder were prominent members.

The Nebraska State Eclectic Medical Association was formed at Lincoln, in October of 1868, and is still in active operation.

The Illinois State Eclectic Medical Society was organized in direct connection with Bennett College. A preliminary meeting was held at Elgin, in May, 1868, at which Dr. Anson L. Clark was elected president, and arrangements were made to procure the coöperation of the Eclectic practitioners of the State. The effort was successful, and a complete organization accomplished the next year. Thirty-eight members were enrolled, among whom were Doctors Henry Wohlgemuth, its president, R. F. Bennett, Robert A. Gunn, Thomas D. Worrall, W. Hope Davis, Henry Buecking, William W. Houser, George Kirkpatrick, H. D. Garrison, Henry Olin, David Bates, S. F. Wehr, W. F. Bayne, Zera Waters, John M. Scudder. The Society now numbers its members by the score.

The Minnesota State Eclectic Medical Society was formed and incorporated at Owatonna, in May, 1869. and continued for many years a very efficient organization.

The same year the Eclectic Medical Association of the new State of Kansas, was organized at Topeka. Its officers were men prominent in the Eclectic ranks.* It has met various fortunes. The first attempt to procure a medical law in the state, resulted in a statute which upon strict construction, gave to this Society the sole power to license physicians. There was accordingly a large increase of its members. The law, however, was repealed at a

* Dr. S. E. Martin, president; George H. Field, vice-president; Noah Simmons, secretary; David Surber, treasurer.

subsequent meeting of the Legislature, and most of them, not having sympathy with Eclectic principles, dropped connection with the Society.

The zeal for organization extended further. The Eclectics of Missouri met at Chillicothe, in June, 1870, and formed a State Eclectic Medical Society, with Dr. J. S. Calloway for president. The outlook was encouraging and the Society prospered for many years.

State Societies were also formed the same year in Michigan and Wisconsin. A call for a meeting to organize a society in Rhode Island, however, met with but a feeble response.

Reformed Medicine at this period was not circumscribed to the United States. An Eclectic Medical Society was also organized in Canada West, now the Province of Ontario, which was very effective in securing for its practitioners equal rights and immunities to those enjoyed by other physicians.

The Eclectics of Great Britain formed a Society in 1867, by the title of the British Eclectic Medical Reform Association, and continued to hold meetings for many years. Among its members were Doctors J. H. Blunt, J. F. Payne, James Skelton, William Hitchman. Unfortunately, however, there was great indifference to thoroughness of medical study, and an indisposition to great exertion for the promotion of the cause. The medical laws of England are very severe toward the minor Schools, and the Reformed practitioners exist under disabilities hard to surmount.

NEW MEDICAL COLLEGES.

With the fresh impulse to establish Eclectic Medical Societies was developed a kindred ambition to found medical colleges to instruct students in Reformed

Medicine. It was generally felt by practitioners that the possession of a medical degree would impart greater confidence, and in some measure assure them against unreasonable discrimination and further encroachment upon their rights.

The Society in the State of New York was the first to make the attempt. There seemed to be an appropriateness in this undertaking. The city of New York was the commercial metropolis of the American Republic, and the establishing of a medical college equal in character and scientific merit to the other institutions there would be an important factor in the way of divesting Eclectic Medicine of a provincial and sectarian character, and giving it a national importance. The American Reformed Practice had originated there, and its re-instatement after so many vicissitudes would be a new triumph for the cause.

At the annual meeting of the Eclectic Medical Society of the State of New York, the proposition was thoroughly discussed. There were prominent physicians in attendance from Massachusetts and Pennsylvania,* who were experienced in the management of medical institutions, and participated in the proceedings. Resolutions were reported and adopted, instructing the Board of Directors to procure from the Legislature of New York an act of incorporation for the Society and a charter for the proposed college.† The desired legislation was accomplished in 1865, and the new college began its first term in October of the

* Doctors C. Edwin Miles, William Paine, Henry Hollembaek, Joseph Sites and John Buchanan.

† Dr. Robert S. Newton was president of the Society. When he severed his connection with the Eclectic Medical Institute and removed from Cincinnati, he had stipulated with Dr. J. M. Scudder that he would not attempt to establish another medical college. After he took up his residence in the city of New York, he declined accordingly a proposition for such an enterprise, but in this case he evidently regarded the action of the society as a paramount obligation.

ensuing year. The president was the Honorable William F. Havemeyer, late Mayor, who was succeeded by Alexander Wilder, in 1868. The Faculty consisted of Doctors Robert S. Newton, Edwin Freeman and J. Milton Sanders, formerly of the Eclectic Medical Institute; William W. Hadley, late of the Central and Metropolitan Medical Colleges; Paul W. Allen, of the Eclectic Institute of Virginia; John M. Youart and Thomas D. Worrall. In its announcements and reports the authorities of this institution announced their adherence to the principles of Eclectic Medicine as set forth by its first teachers.

The Reform Medical College of Georgia resumed lectures at Macon in the autumn of 1867. The Georgia Eclectic Medical College which had been incorporated by the Legislature, in 1865, began lectures in 1866. Doctors I. J. M. Goss, T. A. Warren and S. W. Thompson were the principal instructors. These institutions, neither of them, were affiliated or identified with any Eclectic organization.

The Bennett College of Eclectic Medicine and Surgery was organized in 1868, and incorporated by the General Assembly of Illinois, the ensuing winter. The principal founders were Doctors John Forman, Anson L. Clark, H. K. Whitford, Robert A. Gunn and Herod D. Garrison. The name was chosen in honor of Dr. John Hughes Bennett, of Edinburgh, whom its journal declared to be "the celebrated leader of the Eclectic School, and considered throughout the world as the most eminent medical reformer living." *

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* The announcement declared this explicitly:

"The scientific principle of conservative Eclectic Medicine, first enunciated and so ably defended by Professor Bennett, of the University of Edinburgh, some years ago, has established true Eclecticism upon a basis which cannot be controverted."

Dr. Bennett certainly was more closely identified with characteristic Eclectic procedures than many who now bear the designation of Eclectic.

Some exception was taken by the *Eclectic Medical Journal*, to this position as not being that of American Eclecticism, and as differing from the Eclecticism taught at the Eclectic Medical Institute. A controversy afterward followed, which was maintained for several years with considerable acrimony of feeling.*

SPECIFIC MEDICATION.

In the meantime, Dr. Scudder himself acknowledged a departure from the earlier teachers of the American Reformed Medical Practice. He justified this by the fact that the inception of the Eclectic movement was a revolt against medical despotism, and its first expressions were for unlimited research and entire freedom to choose from all sources which

* It was apprehended in different places at that time that Dr. Scudder was opposed to every attempt to establish new colleges of the Eclectic School. This was deduced from expressions implying that they were short-lived and unworthy of support. "Our profession has been cursed with mushroom colleges and juvenile and inefficient professors," he declared. "Select such institutions as have lecturers proven to be competent by the long occupancy of their positions and the intrinsic value of their publications." The Eclectic Medical Institute he described as amply secured from such failure by the money invested in it, and was superior to other Eclectic schools. Referring, in 1869, to a want of students to sustain more than one or two medical colleges, he estimated the number of Eclectic students at 250 yearly, and that of these the Eclectic Medical Institute would have 175; Rush and Ann Arbor Colleges, being near, and cheap, and good, would get a portion, "leaving a small driblet for any new Eclectic College that may be started. This has been the case in the past," he adds, "and it will very certainly be the case in the future, for the same causes exist. A student, therefore, who attends and takes his diploma from such a school takes the risk of an imperfect and feeble course of lectures from men not properly trained and experienced, and the certainty that he will hold a defunct diploma in a few years."

On the other hand, however, Dr. Scudder declared in 1866, that he would gladly welcome one or more reputable medical colleges. The same year, when recording the establishment of the Eclectic Medical Colleges at Atlanta and New York, he described them as "favorably located, and certain with sufficient perseverance, to succeed," and he wished them every success. Even when criticizing the manifesto of the Bennett College, in 1868, he begged its managers to "come out plainly for American Eclecticism," thus allowing him "to give them the hand of fellowship, and wish them God-speed."

seemed best. "Dr. Beach's shoes do not fit me," said he, "and I do not know why I should wear Dr. Morrow's coat if I can get a better one."

Again, referring to the fact that the opponents of the Eclectic School had approximated to the Eclectics in practice and taken up some of their remedies, having been forced to discard mercury, antimonials, and the lancet, or to use these agents secretly, without the knowledge of the patients, he demanded whether the mission of the Eclectics was thereby fulfilled, "as some faint-hearted Eclectics would say," and whether they were willing to be absorbed by their opponents. "For me," said he, "I do not intend to be '*gobbled up*,' and I could not, if I would, forget the insulting treatment and disregard of our rights manifested by Old-School physicians. They may make up their minds to continued war until they learn that this country is as free in Medicine as it is in religion or politics."

These considerations possibly had some influence in regard to the diverging from the views entertained by the founders of the Eclectic School of Medicine. As early as 1864, Dr. Scudder declared that he believed to some extent in specific remedies and specific modes of treatment. He protested, however, that he did not desire to adopt the Homœopathic doctrine or infinitesimal dosage, but stated that he was making an examination of their therapeutic procedures. He gave much attention to the peculiar views promulgated by Hale, Hempel, Rau, Rademacher and Honigberger. It was practicable from a comparing of the doctrines of these various teachers to digest a theory which should be sufficiently recondite and plausible, while differing materially in certain points from

the formulated notions of the other schools. This would give a doctrinal focus distinct from theirs, and afford a reason for the permanent maintaining of a School of practice apart from them.

The new dogma was denominated "*Specific Medication*," and was defined as follows: "We use the term *specific* with relation to definite pathological conditions, and propose to say that certain well-determined deviations from the healthy state will always be corrected by specific medicines."*

The originality of the doctrine has been repeatedly controverted. Dr. William H. Cook ascribed it to a Thomsonian origin. "It is an old Physio-Medical doctrine," he declared, "that remedies should be adapted to the work in hand; and the more exactly they are thus adapted, the better. The Eclectics 'borrow' this comely suit of Physio-Medical clothing, and would make the world believe it is a brand-new suit of their own."†

Dr. Scudder cautiously refrained from any argument upon this point. He published a series of papers in the *Eclectic Medical Journal* of 1869, setting forth the new doctrine—not making it a test, however, of Eclectic orthodoxy, and it became the distinctive feature of the teachings in the Medical Eclectic Institute.

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* The *American Homœopathic Observer*, of 1869, virtually accepted the hypothesis upon which this proposition is based. "For the present and in the majority of instances," it remarked, "we must take the pathological condition as being practically the ultimatum in all cases, regarding this condition as being practically the ultimatum of the morbific forces operating behind."

† Dr. Cook objected to this use of the term *specific medication*. He insisted that the Homœopathists first gave origin to it, and gave it its definition which the professional world has adopted; and therefore, if the Eclectics do not mean the same thing when they use the term, they should find another phrase to convey their meaning.

THE MEDICAL CONFLICT RENEWED.

In 1845, Dr. Thomas V. Morrow declared his hope that medical monopoly had met its overthrow, and that all laws granting to one class of physicians exclusive privileges had been blotted out forever. Human progress, however, whether moral or scientific, is never in a straight line forward, but always in circles—for a season apparently advancing, and then for a season retrograding. The sound of Dr. Morrow's utterance had hardly died away on the air when the initiative steps were taken to organize the American Medical Association on purpose to check further movement toward medical enfranchisment. Its supporters speedily assumed it to be "the only governing body in medicine." Its influence was chiefly employed to prevent any but members of its own order from receiving appointments to places of public trust. "Regular medicine only," it was set forth, "should be called in to serve the government; and Homœopathy and other irregular sects in medicine, no matter how numerous or influential, politically or otherwise, should not be represented."

There was for the time little other partisan legislation. The General Assembly of the State of North Carolina, however, in 1859, passed an act incorporating the Medical Society of the State, and empowering it to appoint a Board of Medical Examiners; and all practitioners not licensed by that Board were debarred from the right to receive compensation for service.

The Civil War afforded opportunity for aggressive work. The Federal Government, willing to divest itself of some of its responsibilities, had yielded the

control of the medical department of the army, and for a time the exclusive policy was rigidly in operation. The hope was confidently expressed that such proscription would effect the entire uprooting of the other schools of practice. Their general disorganization seemed to give ground for such a hope. In many of the states the medical boards refused to accept every application of an Eclectic or Homœopathist for the post of regimental surgeon. A few, however, passed the cordon; and such governors as Oliver P. Morton, of Indiana, and examiners like those at the city of Philadelphia, accepted competent physicians without regard to their views of therapeutics.

Too generally, however, the character and efficiency of the surgeons were held as of less importance than the school of practice. New graduates and unsuccessful physicians were over-numerous. That the soldiers suffered by this seemed to be regarded as a secondary if not unimportant matter.* The Government soon found it necessary to remodel the medical service, but the war upon the non-conformist physicians was continued to the last.

The smoke of the civil conflict was beginning to disappear from the hills when the lobbies of the legislatures were thronged by eager applicants for special medical legislation. The disbanding of the Federal and Confederate armies had left several thousand army surgeons without occupation, and their professional brethren were now employing various devices to provide for them. Numerous pretexts, more

* A letter from an Eclectic physician holding an appointment, gave this statement: "The records of two U. S. General Hospitals, comprising six thousand cases, show that one-third of all the patients admitted die! * * Of my own cases [included in the enumeration] exactly one in fifteen died."

or less specious, were put forth. The third invasion of Asiatic cholera afforded occasion to procure the sanction of numerous commissions and boards of health, with extraordinary and almost unconstitutional powers, on which a large number of the unemployed physicians were supplied with salaried positions. All Eclectics and Homœopathists were treated as ineligible.

Another step was to obtain legislation which could be interpreted and carried out against physicians of the heterodox schools desirous to begin or continue in practice. It was hoped that this would make room for the others. The pretexts for such legislation were the same as had been put forth in the earlier years of the Nineteenth Century. The people were to be protected in spite of their wishes to manage their own medical concerns. Protection is a significant word in American politics.

So far there had been no general protest. Many of the former obstacles were out of the way. The exciting events had virtually relegated all the older American history to the oblivion which eventually enshrouds all past achievements. The generation that had demanded and secured equal rights for all schools of physicians had passed from active life. It had been succeeded by new men, who very generally possessed feebler stamina, less earnestness of purpose, less profoundness of conviction. Then, likewise, the stringent and arbitrary measures incident in military administration, had operated to accustom the people to passive endurance, and had, to a very large extent, quelled the instinct of liberty in American bosoms. Measures that would have been strenuously resisted a few years before, might be now

attempted with a fair prospect of success. A people has often parted with freedom many years before finding it out.

Under all the pretexts set forth for the new legislation cupidity is manifest, as well as the lust of dominion. There were five to six thousand Eclectic physicians in the country, a like number of Homœopathists, and many Physio-Medical and unclassified practitioners. The excluding of a sufficient number of these from their lawful right to follow their calling would create vacant places for their competitors out of employment. The machinery of a Trade-union was set in motion; the American Medical Association, which had been organized originally for such purposes, abetted the movement; and the auxiliary societies in the several states and others seeking for favor, acted together in the matter like disciplined soldiers. It was made in this way to seem like a common demand everywhere.

In 1859, a bill was introduced into the legislature of Pennsylvania, requiring that every practitioner should be a graduate of a medical school. Dr. John Buchanan, then dean of the Eclectic Medical College of Pennsylvania, at once declared his hearty approval of the measure. "It is an act," said he, "that will do much in elevating the standard of our profession—in affording protection to our citizens from those unqualified to practice. It is entirely free from sectarianism."

The General Assembly of Ohio, had already in 1868, enacted a statute more severe and stringent than any of the others. It required the physician to be a graduate of some medical school, or to hold the certificate of a medical society, except he had already been engaged ten years in the practice of medicine.

The penalty was one hundred dollars for the first offense and imprisonment for the second.

Dr. Scudder, remarking on this bill, referred to the fact that only one school of physicians had been active in procuring medical legislation, and intimated that the power would be used against the others. "A Board of Examiners drawn from the regular ranks would be like some courts; organized to convict all irregulars." In regard to quacking, he declared: "If quackeries are not injurious to life and health no one has a right to complain." This was not a plea in favor of quackery as many would insinuate, but a consideration of its relations and its tenure with its purchasers.

The next proposition was to establish a censorship over practitioners of medicine. The Surgeon-General who had been diligent to remove Eclectic and Homœopathic physicians from the military service, complained bitterly of the utter unfitness of the others. "None but graduates of the regular medical schools were admitted to examinations, and yet over eighty per cent. of these were rejected for incompetency. The ignorance betrayed by many of the candidates was deplorable, proving that the diploma of a medical college had ceased to be of any value as evidence of capacity."

Thus, was need urged of legislation, not because the heterodox institutions had been found at fault, except for being "irregular," but because of the deplorable illiteracy and unfitness of those denominated "scientific." Boards of Medical Examiners were suggested. The jealousies of the colleges was sufficient, however, for years, to hold back such legislation, the ulterior effect of which must be to weaken their importance.

The example of Canada, likewise had a deterrent influence. Examiners had existed there for many years; when in 1861 an act was passed by the Legislative Council and Assembly to create a new Board to examine all persons desiring to obtain a license to practice medicine in the Province "according to the doctrines and teachings of Eclectics."

This legislation was followed, a few years later, by other measures, placing the three schools of medicine on an equal footing. Nothing like this was desired. The dominant school in Canada set itself in 1869 to the work of procuring the annulling of all liberal legislation, thus taking the lead of the "regular profession" of the United States.

The first enactments were sufficiently mild to allay apprehension, except from the far-seeing. Some of the heterodox physicians themselves regarded them with favor. Curious as it may seem, many men having been established in exclusive privileges, are willing to help impose disabilities to prevent others from obtaining them. The medical statutes of Wisconsin, Iowa and Illinois at that period simply required physicians to possess diplomas from reputable medical colleges, on penalty of being disqualified from recovering fees in a court of law. In 1869, an enactment of similar tenor was passed in Minnesota. More stringent legislation followed afterward.

In regard to enactments to regulate the practice of medicine, Dr. Scudder acknowledged that his mind was not fully made up as to what was really best for the profession and the people. He seemed to hesitate between his convictions of natural right and governmental supervision. "Entire freedom to choose a

medical practice and physician is in the spirit of our institutions," he frankly declared, "and entire freedom of medical practice, governed only by those common laws which protect against injury to life or limb, would seem to be also the right of freemen. Laws never increase the real value of anything; and it is as great nonsense to talk of elevating the medical profession by law, as to raise the price of cows, calico and other commodities, and improve their quality by legislative enactment. If there is a demand for skilled labor, individuals are trained to meet it; if there is a demand for higher attainments in education the supply naturally follows. So if there is a real demand by the people for a greater degree of skill, and a more intelligent use of remedial means and appliances, it will be supplied as certainly as effects follow causes."

On the other hand, "when medical colleges are sufficiently numerous," Dr. Scudder approved of a law requiring every practitioner to present evidences of a sufficient course of study. This he thought that the State might justly demand. It being admitted, however, that the diploma of a medical college is by no means sufficient evidence of a good medical education, a plea is made for the State to provide for examinations to test the capacity of each practitioner This of course relates to the physicians created by the schools and not endowed by native fitness. Dr. Scudder compared medical examining boards to boards for examinations as to the proficiency of the ministry of religion. When one religious sect obtained control of such a Board, candidates from the other sects would receive no mercy. So in medicine; only with a Board of each school, or equal representa-

tion of each school upon a common Board, would there be any hope of fairness.*

In Michigan the legislation took a shape most unacceptable to those who had set it in operation. A medical department had been established in the State University at Ann Arbor, and maintained from the public treasury. Presently the Legislature directed that a professorship of Homœopathic Medicine should be added. For years, however, the Board of Regents, on one or another frivolous pretext, evaded any complying with the law. In 1868, the Legislature again took the matter in hand, and made all appropriations for the department conditioned upon the establishing of the chair. Much protesting was made, and threatening to resign, but eventually the law was carried into effect, and the elements subsided into calm.

The American Medical Association took another aggressive step. The Committee on Education recommended that "an appeal be addressed to the various state authorities advocating that no more charters be granted to medical colleges which do not agree to adopt the plan of teaching which the Association shall hereafter demand." This was followed by a renewal of efforts for restrictive legislation, under the pretext of elevating the standard of medical attainment, regulating the practice of medicine, and protecting the people from quackery and empiricism. At that period the trend of American legislation was unequivocally toward the creating of monopolies and

* No arrangement of this character had ever been regarded as a final disposition of the matter. Those who conceived the purpose of the medical laws regard such boards only as temporary makeshifts and make effort unceasingly to procure a change. The examinations are often little else than schoolmasterlike exhibitions, of small consequence in determining the fitness of the candidates. But with Medical Boards most of the Medical colleges are of little account.

privileged bodies, the multiplying of offices and general irresponsibility. Bills were introduced simultaneously into the legislatures similar in purport and language, showing their common origin. As the tendency of such measures is to increase litigation to the farthest pitch of endurance, lawyers often constituted their advocates in the legislative lobbies. It was a strife between cunning wrong and passive truth.

NEW NATIONAL ECLECTIC MEDICAL ASSOCIATION.

The awakened impulse of Eclectic physicians to form societies, tended directly to open the way for combining once more in one general organization. Their exclusion from the volunteer military medical service in many of the states, as in Massachusetts, New York and Ohio, operated as a stimulus to union for future exigencies. The Massachusetts Eclectic Medical Society took the preliminary steps, in 1864, by appointing a committee to correspond with the secretaries of the societies in regard to the feasibility of a national organization.

Dr. Robert S. Newton was the first promoter of the movement. He had been identified with the National Eclectic Medical Association, in concert with Dr. Morrow and his colleagues in 1848; had been zealous to maintain it when his colleagues at Cincinnati had deserted it, and was its president at its last meeting, in 1857. He was a man of marked individuality, fertile in expedients, plausible in address, with a rich endowment of statesmanlike qualities and powers of persuasion. He had now became a resident of the city of New York, and had actively employed him-

self to establish closer relations among the Reformed practitioners. He had attended the meeting in Massachusetts in 1864, and the action taken at that session was largely due to his influence. The president, Dr. Paul W. Allen, engaged heartily in the proposed measure.

The Eclectic Medical Society of the State of New York, held its second annual meeting a week later, and adopted resolutions concurring in the proposition. Dr. Jacob Van Valkenburg, the secretary, was directed to correspond with the proper officers of other societies with a view to effecting a national organization of Eclectic physicians. Present at this meeting were Doctors Joseph Sites, Henry Hollembaek and John Buchanan, of the Eclectic Medical Society of Pennsylvania. They promised to unite in the movement and were received as members.

At its meetings for the next five years this action was repeated; committees of correspondence appointed and delegates selected.

The State Society in Ohio having ceased to exist and a new Association having been duly organized, the question was introduced at its annual meeting, in 1867. A resolution was presented by Dr. J. M. Scudder, and adopted, declaring that the time had come for the organization of a National Society, and asking the coöperation of the several Eclectic Medical societies.*

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* He defined his views in an editorial article. "We want associated action for the regulation of our own affairs and for the further advancement of Eclecticism. I hold that no one man or half-dozen men, self-appointed, have the right to control the faith, standing and practice of six to eight thousand. * * * If the Eclectic physicians would unite as one man, they would obtain all they could possibly desire. Instead of being a personal fight, it is the campaign of a well organized and resistless army."

The matter continued under discussion for several years. Several endeavors were made to fix a time for the beginning of active operation. The Eclectic Medical Society of Pennsylvania adopted a resolution in 1866, contemplating a National Convention at Philadelphia in 1867. The apprehension, however, that the Eclectic College there was not properly conducted had developed into conviction. The controversy with Dr. Paine, which had finally induced him to withdraw from the Eclectic body, increased this feeling. Nevertheless, there had been no open division, and many of the societies were on friendly terms with the institution. It was plain, however, that the time for more complete organization had not come.

The proposition was also made to hold the preliminary convention at Cincinnati. The National Eclectic Medical Association at its last session, in 1857, had appointed that place for the next meeting there, and it seemed appropriate to act upon that suggestion. The Association of Indiana, as if to direct the action, appointed two delegates, in 1867, "to the National Association which meets at Cincinnati in June, 1868." The matter, however, went no further, and at its next meeting, at Indianapolis, in 1868, Dr. Joseph Adolphus offered a resolution calling upon the other societies and upon the medical journals to unite their endeavors, "that a National Eclectic Medical Association be formed at as early a day as possible."

There was much reason for such a demand. Many were becoming averse or indifferent to a general organization, through distrust of the persons most active, and from grave doubts of its feasibility. The ruling spirits of the Eclectic Medical Society and

College of Pennsylvania, finding themselves losing the confidence of the physicians of the New School, determined to forestall the movement. The line of division, however, had not been definitely laid down, except by the Eclectic Medical Society of New York, and several societies exhibited a disposition to act with the organization at Philadelphia. It was announced in 1869, that the National Eclectic Medical Association had been formed, and would hold its annual meeting on the twenty-eighth of January, 1870. This was to be an organization for the benefit of practitioners solely, and no professor of a medical college would be suffered to have a controlling influence, to make it subsidiary to private ends.

The meeting in January was imposing in description. Delegates were reported from every state in the Union, and from Canada, eighty in all;* and a constitution adopted. A committee of correspondence was appointed to communicate with the executive officers of medical societies, and another to prepare a National Eclectic Pharmacopœia. The Rev. Matthew Hale Smith was elected president, and the next annual meeting was appointed at the city of Washington, in January, 1871.† The subsequent meetings, however,

* Among these were Doctors J. B. Gallup, John Sims, of Delaware; J. R. Simmons and William M. Durham, of Georgia; Benjamin Thompson, of Iowa; Dr. James C. Harrell, of Kentucky; W. Young and E. G. Jones, of Maine; G. H. Hutchings, of Massachusetts; M. H. Smith, W. H. Bowlsby, E. P. Huyler and L. D. Broughton, of New York; W. H. Blake, of Pennsylvania.

† Doctors Daniel Mayer, of West Va.; W. M. Durham, of Georgia; E. P. Huyler, of New York; G. Hutchings, of Massachusetts, and Philip Rowden, were vice-presidents. The Board of Censors was announced, and comprising among others, Doctors J. W. Johnson, of Connecticut; Duncan McLeod, of Canada; John Sims, of Delaware; W. M. Durham, of Georgia; A. Abbett, of Indiana; George W. Brown (formerly of Kansas), of Illinois; Joseph Adolphus, of Iowa; Samuel York, of Maine: Horatio G. Barrows, of Massachusetts; A. R. Brown, of Michigan; J. M. Roberts, of New Hampshire; James L. Watson, of New York; J. Monroe Templeton, of Vermont; J. S. Eastland, of Wisconsin.

were held in Philadelphia, but the proceedings were of no historic consequence. The Eclectic Medical Societies generally disowned the whole affair, and with the legal proceedings which were instituted in 1878, the Association, Eclectic Medical College, and the Eclectic Medical Society, of Pennsylvania ceased to exist.

In 1869 the movement for national organization acquired new strength. Dr. Newton was unremitting and indefatigable in his endeavors, corresponding with leading physicians and attending the meetings of the Eclectic Medical Societies in the several States. To his efforts and energies must be ascribed the ultimate success.

In the summer of 1869, the Eclectic Medical Association of Iowa, on the motion of Dr. Joseph R. Duncan, its president, adopted a resolution urging immediate measures, and appointed Doctors Duncan and Molesworth a Committee of Correspondence. The Society of New York went further and designated Doctors R. S. Newton, J. M. F. Browne and Prince A. Morrow, a Committee of Conference with a view to early action. There was now no further delay.

The suggestion to hold the preliminary meetings in the city of New York did not meet with general favor. The proposition to convene at Cincinnati was made and promptly declined. Chicago was then selected. The call was prepared and signed by the executive officers of eight Eclectic Medical Societies and the two Colleges at New York and Chicago.*

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* The Societies of New York, Maine, Connecticut, Indiana, Minnesota, Iowa, New Hampshire and Illinois were thus included. The name of the author, as president of the Eclectic Medical Society of the State of New York, headed the list. The signers were generally representative men of the Eclectic School.

Twelve delegates were allotted to each State Society, and eleven of these were represented. The convention assembled on the twenty-seventh of September, 1870. It was a very enthusiastic session. The Eclectic physicians of Chicago put forth every effort to make the occasion enjoyable and memorable. Dr. Robert S. Newton presided with Doctors George W. Pickerill and John W. Johnson as secretaries. It was decided to organize the Association anew under the former name adopted in 1848.* Ninety delegates were accepted as members. Several of these were women, although many members had not been ready to adopt this new policy so sternly repudiated by the other Schools of Medicine.

A Constitution, with By-Laws and a Code of Ethics, was adopted. The latter was in some respects broad, authorizing special as well as general practice; the use of cards, lectures, printed publications and certificates of cures; the presence of laymen at surgical operations; the holding of patents for inventions, and free consultation. But except a person had qualified himself practically by attendance at college or otherwise with the various departments of medical knowledge, he might not be considered as a physician; and thenceforward, a young man was imperatively required to attend two full courses of lectures and graduate from a medical college, regularly chartered.†

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* There was some difference of judgment, and the author pleaded for omitting the denominational appellation. Probably the enthusiasm evoked by the success of the convention decided the matter. Some, too, were mindful of the history of the Physio-Medical School which had changed its name so often as to effect seriously its prestige. Besides, it may have been deemed politic to afford no apparent opportunity for the leaders at Philadelphia to vaunt theirs as the genuine representative body.

† These provisions were adopted in 1872.

A permanent organization was effected by the election of officers, namely: Dr. John W. Johnson, of Connecticut, President; Doctors Stephen H. Potter, of Ohio, James S. Cowdrey, of Indiana, and William Molesworth, of Iowa, Vice-Presidents; Robert A. Gunn, of Illinois, Secretary; James M. Comins, of New York, Corresponding Secretary, and Benjamin J. Stow, of New York, Treasurer.* Dr. Johnson was a man of superior energy and decision of character, familiar with public business, and popular in the Eastern States. He had belonged to the Botanic School and acted as trustee and professor in the Worcester Medical Institution. The Secretary, Dr. Gunn, was a graduate of the Medical University at Buffalo, of sanguine temper, enthusiastic, ready with pen and effort, and in earnest with whatever he undertook. He had been a founder of the Eclectic Medical Society of Illinois, of the Bennett College, and the Chicago *Medical Times;* and the successful organization of the National Association was largely due to his activity and persistent efforts. He excelled as a writer and lecturer, and was among the most accomplished surgeons in the Eclectic School.

Among the first measures adopted was the appointing of a committee to prepare a National Eclectic Medical Pharmacopœia, and directing the Secretary to procure a copyright for the titlepage.

The second meeting after the reörganization was held in the hall of the Young Men's Christian Association, in the city of New York, beginning on the fourth day of October, 1871. Twelve Societies and

* There was an implied understanding that no professor or representative of a medical college should be chosen president. The rule was enforced till the election of Dr. John King in 1879.

nineteen States were represented by delegates. Dr. Alexander Wilder presented the act of the Legislature of New York, incorporating the Association, and a resolution was adopted making it a part of the constitution. Dr. Joseph R. Duncan, of Iowa, was elected President; Doctors C. Edwin Miles, of Massachusetts, Alexander Thompson, of Pennsylvania, and Vincent A. Baker, of Michigan, Vice-Presidents; Dr. R. A. Gunn, Secretary; Dr. J. M. Comins, Corresponding Secretary and Dr. B. J. Stow, Treasurer.

Resolutions were adopted denouncing unqualifiedly the selling of medical diplomas, and all persons and colleges engaged in the traffic; also condemning physicians of all Schools engaged in "the growing evil of the practice of abortion," and "the vending by physicians of patent or proprietary medicines, or boastful advertisements."

A resolution of greeting to the Eclectic Medical Association of Great Britain was also adopted.*

The Association held its third meeting at Indianapolis, beginning on the eighteenth of September, 1872. Governor Baker delivered the address of welcome. A significant occurrence was the accession of new members from Ohio, who had remained apart and adverse to the movement. At their instance the provisions of the Code of Ethics were expunged, which related to specialties in practice, advertising, the holding of patents for inventions, and the requiring of future practitioners to graduate from medical colleges after two full terms of attendance. The subject of an Eclectic Pharmacopœia was discussed,

* "Its influence and power are such," Dr. Newton declared, "that at the last Parliament they came within three votes of repealing the entire Medical Laws of England."

and a committee appointed with directions to prepare and publish the work at once.* Dr. Scudder presented a syllabus on Positive Medication, which was discussed in connection with the subject. The following officers were chosen for the ensuing year, namely: C. Edwin Miles, of Massachusetts, President; Doctors Lewis Frazee, of Indiana, Dennis E. Smith, of New York, and M. B. McKinney, of Michigan, Vice-Presidents; Dr. Robert A. Gunn, Secretary; Dr. Austin B. Westcott, Corresponding Secretary; Dr. B. J. Stow, Treasurer.

The fourth meeting was held at Columbus, in Ohio, beginning on the twenty-fifth day of June, 1873. Governor Noyes made the address of welcome.† The discussions embraced a variety of professional topics, among which Specific Medication was prominent. Dr. H. D. Garrison presented a preamble and resolution, setting forth that the people are almost wholly incapable of estimating the scientific attainments of medical practitioners, and that diplomas had been granted by medical colleges of all schools to persons grossly incompetent, so that they have ceased to be sufficient evidence of qualifications, and therefore recommending the passage of laws in the various states, making a rigid examination necessary of candidates for medical practice.‡

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* Doctors John King, of Ohio, H. D. Garrison, of Illinois, T. L. A. Greve, of Ohio, E. S. McClellan, of New York, and John M. Scudder constituted this committee.

† He remarked that the Association had four colleges in successful operation, and a constituency of six thousand practitioners. The American Medical College, at St. Louis, had been established during the past years.

‡ The following officers were elected, namely: C. E. Miles, M. D., President; Doctors W. M. Ingalls, of Ohio, John R. Borland, of Pennsylvania, R. A. Beach, of New York, Vice-Presidents; Dr. R. A. Gunn, Secretary; Dr. B. J. Stow, Treasurer, and Dr. O. H. P. Shoemaker, Corresponding Secretary.

The fifth meeting was held at Wesleyan Hall, in the city of Boston, beginning on the sixteenth day of June, 1874. The president delivered an address urging the importance of Sanitary and Preventive Medicine. A resolution was adopted requesting the instructors in Eclectic medical colleges to adopt, as near as practicable, a uniform standard of qualifications, and to require proficiency in Medical Botany and Chemistry, or in Materia Medica and the principles of Medicine. The following officers were elected: W. M. Ingalls, of Ohio, President; Doctors Luke F. Stoddard, of Illinois, S. B. Munn, of Connecticut, and H. D. Jillson, of Massachusetts, Vice-Presidents; Dr. B. J. Stow, Treasurer; Dr. Robert A. Gunn, Secretary; Dr. J. R. Borland, Corresponding Secretary.

The sixth meeting of the Association took place at Springfield, in Illinois, in the Hall of the House of Representatives, beginning on the fifteenth of June, 1875. Governor Beveridge delivered the address of welcome. The session was occupied by medical and surgical topics, and a visit was paid to the mausoleum of the late President Lincoln. The following officers were elected: Benjamin J. Stow, M. D., of New York, President; Doctors Robert W. Geddes, of Massachusetts, O. H. P. Shoemaker, of Iowa, A. B. Woodward, of Pennsylvania, Vice-Presidents; Dr. Anson L. Clark, of Illinois, Secretary; Dr. George C. Pitzer, of Missouri, Corresponding Secretary; Dr. James Anton, of Ohio, Treasurer.

The next annual meeting, the sixth, was held at Willard's Hotel, in the city of Washington, D. C., and commenced on the twenty-seventh day of June, 1876. Thirteen states were represented, but the attendance

was significantly less than in previous years, and many were apprehensive that this would be the final session. The proceedings were spirited, and measures adopted to assure the future prosperity of the Association. The principal discussion related to the contemplated Eclectic Pharmacopœia, which had received little attention from the several committees. A resolution was adopted to appoint a Bureau of Correspondence to prepare and circulate memorials, and to present them, asking Congress for legislation to provide equal favor for each distinctive school of medicine, in medical appointments in the Army, Navy and Pension Bureau,* and equal representation on all Boards of administration and examination, without liability to proscription or rejection on any pretext based on a code of ethics. A committee was also appointed to revise the Constitution and By-Laws, with a view to secure greater efficiency and prosperity to the Association. The secretary was also directed to prepare for publication a list of the remedial agents and compounds discovered and introduced by Eclectic physicians and druggists, which have since been adopted as official by the Old School, carefully withholding the credit of their introduction and original discovery from those to whom it rightfully belongs.†

* Dr. Barnes, the Surgeon-General, rigorously excluded all Eclectics and Homœopathists from appointment in the Army, and Dr. Henry Van Aernam, the Commissioner of Pensions, removed them from office as examiners. The Eclectic Medical Society of New York, and several Homœopathic Medical Societies, presented the matter and their complaints to the President, who removed the Commissioner.

† See *Transactions of the National Eclectic Medical Association* for 1877-'78 (Vol. VI.), page 209. When a speaker of an Œcumenical Council of Rome attempted to mention favorably an utterance of a distinguished Protestant writer, he was called to order at once, on the ground that it was not permitted to name a Protestant with approval. It is also said that Omar, the Khalif, commanded the Alexandrian library to be burned, declaring that if the books contained doctrines to

The following officers were elected: O. H. P. Shoemaker, M. D., President; Doctors Stephen B. Munn, of Connecticut, Lefaver H. Borden, of New Jersey, Joseph A. Munk, of Missouri, Vice-Presidents; Alexander Wilder, of New Jersey, Secretary; W. Hope Davis, of Illinois, Corresponding Secretary; James Anton, Treasurer.

The seventh annual meeting convened at Pittsburg, in Pennsylvania, on the thirteenth day of June, 1877. The committee on revision of the Constitution submitted a report which was discussed, amended and adopted. It made radical changes, providing that henceforth the National Association should be a representative body, receiving new members only upon the nomination of auxiliary organizations, and holding distinct and defined relations to the State societies, and such as were essential to their mutual efficiency. The qualifications for the medical degree were strictly laid down, and two full terms of lectures required, with three years of medical study; and all officers and instructors in colleges voting or coöperating in a disregard of this requirement, were made liable to censure and expulsion from the Association. Disreputable modes of practice or advertising, which tended to reflect discredit, were declared unprofessional.

The preamble was a Bill of Rights, and asserted unequivocally that the profession of medicine may be exercised by any and every person duly qualified by natural endowment and acquired skill

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be found in the Kurán, they were superfluous; if not, then they were false. By an analogous rule all Eclectic and Homœopathic literature had been vigorously forbidden to be accepted, or their treatment and medicines employed till "introduced" or pirated by some authority denominated *regular*.

and knowledge; that it should no more be hedged in by penal laws, ethical codes or other instruments of barbarism and oppression, having become the lawful vocation of citizens like other callings; that all legislation, political favor, or other discrimination tending to restrict or contravene this right, especially for the purpose of fostering any school of practice, under the pretext of regularity or superior scientific knowledge, is a violation of the spirit of the Constitution of the United States, and ought to be opposed and resisted as a departure from the principles of republican government as well as of natural right; and that Reformed practitioners have the same and every claim to the encouragement of the government as physicans of the other schools and all good citizens.

From this period the Association became a more prosperous as well as influential organization.

The following officers were elected:- Stephen B. Munn, M. D., President; Doctors C. D. Thompson, of Pennsylvania, Edward M. Shaw, of Michigan, R. Elton Warner, of Pennsylvania, Vice-Presidents; Dr. Alexander Wilder, Secretary; Dr. Stephen H. Potter, Corresponding Secretary; Dr. James Anton, Treasurer.

The eighth annual session was held in Michigan, beginning on the nineteenth of June, 1878. The attendance was larger than at former meetings. A report was received from the Bureau of Correspondence, setting forth, that the Commissioner of Education of the United States had omitted in his reports of the Centennial Exhibition, all mention of the American Eclectic and Reformed Practice. At his suggestion a sketch of the Eclectic School had been

prepared. This had been delivered to Dr. N. S. Davis, to include in the Medical Reports, who had suppressed it, together with documents relating to the Homœopathic practice. For this delinquency Commissioner Eaton was technically, if not morally, responsible. The following officers were elected: John King, M. D., President; Doctors J. H. Bundy, of California, Anson L. Clark, of Illinois, John W. Kermott, of Michigan, Vice-Presidents; Alexander Wilder, Secretary; James Anton, Treasurer.

The ninth annal meeting was held at Cleveland, in Ohio, commencing on the nineteenth of June, 1879. The president, in his address, advised the lengthening of the collegiate terms, and a higher standard of general education. He called attention to the efforts annually made in the Legislatures for arbitrary laws, with the hope and intention of effecting the annihilation of all medical systems except the favored one, and advised the forming of committees in every state to watch over the interests of Reformed physicians. He denounced the laws already made as a disgrace to the intelligence of the age and to the people where they had been enacted.

A special committee had been appointed on the manufacture of medicines. A report was made recommending the annual appointment of a "Committee on Pharmacopæia," to correspond with manufacturers and others, to conduct experiments, till the work was completed, and to present at the next annual meeting a plan for an American Pharmacopœia. The report was accepted and the Committee appointed.* A resolution was also adopted declaring the *American*

* Doctors Albert Merrell, S. B. Munn, C. E. Miles, F. J. Lock, and A. L. Clark, constituted this committee.

Dispensatory the standard authority of the National Eclectic Medical Association. Resolutions were also presented by Dr. Scudder and adopted, naming several medical colleges as in good standing, and approving of their courses of study,* with the further recommendation of a graded course, or attendance of three years at lectures. Several noteworthy amendments were made to the By-Laws. One by Dr. McMaster required the two terms for a student at college to have an interval of five months instead of being consecutive. Another prohibited advertising by handbills, circulars or certificates of cure, or announcing as member of any Eclectic medical society or college A third required specific charges to be made against an accused member, and a month of time allowed for reply, instead of suffering him to be accused, tried and punished all at one time. The election of officers was fixed on the third day of the session of the Association. The following officers were elected: Milbrey Green, of Massachusetts, President; Doctors John B. Shultz, of Indiana, Albert G. Springsteen, of Ohio, Henry. B. Piper, of Pennsylvania, Vice-Presidents; Alexander Wilder, Secretary; James Anton, Treasurer.

The next meeting was held at Chicago, beginning on the sixteenth of June, 1880. It being the tenth anniversary of the reörganization, special attempts had been made for display and entertainment. All the surviving ex-presidents, except Dr. Stow, were in attendance. Dr. Merrell, from the Committee on Pharmacopœia,

* There were the Eclectic Medical Institute, the American Medical College of St. Louis; the Eclectic Medical College, of New York; the Bennett College and the United States Medical College. Dr. H. B. Piper's motion to include the Georgia Eclectic Medical College was lost. The resolutions covered another question that was otherwise likely to excite controversy.

presented a plan for the work, to be a reliable standard, to dispense with a large number of forms for a drug, and having but one liquid and one in powder, to have processes for the standard forms simple, to omit compound formulas. He proposed four forms, a tincture, an alcoholic extract, a powdered alcoholic extract, and a saccharated extract. The plan thus submitted was adopted, and a proposition was accepted from Dr. Merrell to prepare and publish the work at his own expense, he having the copyright.

A resolution by Dr. A. J. Howe was adopted, declaring the members in favor of State Boards having their chief object the suppression of traffic in medical diplomas, and to expel unqualified persons from practice, provided such Boards shall not be under the majority rule of any one School of Medicine.

An order was also made to establish sections for the various departments of medical science, at the annual meetings. The California Medical College was accepted as auxiliary.

The following officers were elected: Anson L. Clark, M. D., President; Doctors V. A. Baker, of Michigan, H. B. Piper, of Pennsylvania, and A. G. Springsteen, of Ohio, Vice-Presidents; Alexander Wilder, Secretary; James Anton, Treasurer.

The eleventh annual meeting was held at the Lindell Hotel, in St. Louis, beginning on the fifteenth day of June, 1881. The papers contributed and the discussions were highly creditable. A new auxiliary society in Arkansas was announced. The Eclectic colleges of Indiana and Georgia having made application to be recognized like the six other institutions, the matter was referred to a select committee, and a report made, proposing to defer action till a future

time. Finally, a resolution was offered by Dr. R. A. Gunn, and adopted admitting the two colleges to the privileges and recognition of the National Association for one year.

A resolution was also adopted asking the publishers of Appleton's *Cyclopædia* to correct their description of the Eclectic Practice of Medicine, which was calumnious and erroneous.

A paper upon *Vaccination* was read by Dr. J. A. Reid, and gave rise to a warm discussion.

The officers elected were as follows: William S. Latta, M. D., of Nebraska, President; Doctor Robert W. Geddes, of Massachusetts, Samuel S. Judd, of Wisconsin, Hamilton S. McMaster, of Michigan, Vice-Presidents; Alexander Wilder, Secretary; James Anton, Treasurer.

The twelfth meeting took place in the city of New Haven, the session beginning on the twenty-first day June, 1882. The two medical colleges of Indiana and Georgia were accepted without opposition. Dr. Merrell sent a communication announcing the early completing of the Pharmacopœia. This year for the first time was introduced the mode of holding sections for the different branches, and, although a new matter, was successful. The officers for the ensuing year were as follows: Andrew J. Howe, M. D., of Ohio, President; Doctors A. B. Woodward, of Pennsylvania, Henry K. Stratford, of Illinois, Maurice F. Linquist, of Connecticut, Vice-Presidents; Alexander Wilder, Secretary; James Anton, Treasurer.

The thirteenth annual meeting was held at Topeka, Kansas, commencing on the twentieth day of June, 1882. The invocation was offered by Bishop Vail, of the diocese of Kansas, and the address of welcome

was delivered by Governor G. W. Glick. Fifteen state societies, besides local organizations, and six medical colleges were represented. A standing committee on medical institutions was ordered. The committee on Pharmacopœia* reported that they had examined the manuscript completed by Dr. Albert Merrell, and that it would more fully meet the requirements of the Eclectic medical profession than any publication now extant. A resolution was adopted accepting the report.

The officers for the ensuing year were as follows: Edwin Younkin, M. D., President; Doctors J. Milton Welch, of Kansas., George Covert, of Wisconsin, Lemon T. Beam, of Pennsylvania. Vice-Presidents; Alexander Wilder, Secretary; James Anton, Treasurer.

The fourteenth annual meeting was at Cincinnati and began on the eighteenth day of June, 1884. The address of reception was made by Dr. John King, and answered by the secretary. Twenty societies of states and five medical colleges were represented at this session. The professional work of the sections was successfully conducted. Dr. King delivered an address on Medical Legislation, criticizing the statutes requiring registration, and the State Examining Boards as invasions and infractions of civil liberty and personal rights. A resolution was adopted declaring the National Eclectic Medical Association in favor of elevating the standard of medical education, but as opposed to all class medical legislation. Dr. A. L. Clark, by invitation, delivered an address in support of medical examining laws. The two medical col-

*Doctors J. Milton Welch, S. B. Munn, H. K. Stratford, B. L. Yeagley, V. A. Baker.

leges in Iowa, the King Medical College, and medical department of Drake University, were accepted as on probation for a year. The officers for the ensuing year were as follows: Henry K. Stratford, M. D., President; Doctors J. Milton Welch, of Kansas, William M. Durham, of Georgia, William F. Curryer, of Indiana, Vice-Presidents; Dr. Alexander Wilder, Secretary, Dr. James Anton, Treasurer.

The fifteenth meeting was held at the city of Altoona, in Pennsylvania, beginning on the seventeenth day of June, 1885. The auxiliary societies and medical colleges were fully represented, and the professional work of the sections was transacted with gratifying success. A resolution was adopted recommending as a manual and text book, the *Digest of Materia Medica and Pharmacy*, which had been prepared by Dr. Albert Merrell, under the direction and with the approval of the National Eclectic Medical Association. The officers elected for the ensuing year were as follows: Henry Beam Piper, M. D., of Pennsylvania, President; Doctors John W. R. Williams, of Alabama, George Covert, of Wisconsin, Elizabeth G. Smith, of Connecticut, Vice-Presidents; Dr. Alexander Wilder, Secretary, Dr. James Anton, Treasurer.

The next meeting took place at Atlanta, in Georgia, and was convened on the sixteenth day of June, 1886. The address of welcome was delivered by the Mayor, Hon. George Hillyer, and answered by the Secretary. This was the first meeting of the Association in the Southern States, and all the proceedings were marked by a rare courtesy and cordiality. It was successful in a professional sense, and an unusual number of new members were received. It having been sup-

posed from the terms of invitation and former usage, that physicians of all schools were admitted as members at the meetings of the International Medical Congress, the Association elected twenty-six delegates with alternates for its session at Washington, in 1887. The officers elected were as follows: Lorenzo E. Russell, M. D., of Ohio, President; Doctors Theophilus J. Batchelder, of Maine, Joseph N. Adkins, of Texas, Henrietta K. Morris, of Illinois, Vice-Presidents; Dr. Alexander Wilder, Secretary; Dr. James Anton, Treasurer.

The seventeenth meeting was convened at Waukesha, in Wisconsin, on the fifteenth of June, 1887. Dr. Batchelder called it to order, and Mr. D. J. Hemlock delivered the address of welcome. A large attendance characterized this session. The president had changed the order, substituting an "Arena of Debate" for the sections, and it proved a successful arrangement. On motion of Dr. Wilder, the action of the last year in relation to delegates to the International Congress was reviewed, and recommendations afterward adopted to invest all who desired it with the proper credentials.*

The officers for 1887–8 were as follows: Samuel S. Judd, M. D., of Wisconsin, President;† Doctors William M. Durham, of Georgia, Robert A. Hicks, of Tennessee, G. Hermann Merkel, of Massachusetts Alexander Wilder, Secretary; James Anton, Treasurer.

The annual meeting for 1888, at Detroit, in Michi-

* The Congress was held at Washington in September, 1887. The American Medical Association, overriding the action of the previous session at Kopenhagen, adopted the policy of excluding all but those of its own kind. Though the attendance was large, the results were little regarded, and its proceedings were not published and distributed.

* Dr. Judd died August 30, 1887, and Dr. Durham became president in his place.

gan, was among the most significant in its action. The Iowa Eclectic Medical College was accepted by the Association. The time was principally employed in a "Medical Symposiac" in the discussion of the following topics: Asiatic Cholera, Liberal Education of Physicians, Specific Medication, Eclectics in Surgery, Relative Merits of Medication and Nursing, Possibilities of Uniting the Several Schools of Medicine. On motion of Dr. Albert Merrell, a Standing Committee was created on Medical Legislation, to consider all matters relative to the enactment or enforcement of the laws in the several states for the regulation of the practice of medicine, so far as they influence unfavorably the status of Eclectic or Eclectic physicians. A resolution was adopted recommending the several Eclectic Medical Societies to establish Vigilance Committees or Committees on Legislation to procure the defeat or amendment of all bills and statutes tending to abridge the rights of honorable practitioners or establish discrimination between the different schools of medicine.

The following officers were elected, namely: Milton Jay, M. D., of Illinois, President; Doctors Vincent A. Baker, of Michigan, John W. Migrath, of Georgia, William A. Montgomery, of Tennessee, Vice-Presidents; Dr. Alexander Wilder, Secretary; Dr. James Anton, Treasurer.

The nineteenth annual meeting was held at Nashville, in Tennessee, beginning on the seventeenth of June, 1882. The Association was received by the Hon. A. S. Colyer, and the Hon. T. P. McCarver, mayor of the city. Both assured the members of the kindest fraternal sentiment; and the secretary, in reply, declared that they knew no distinctions of state

and district, except as accidents of place, and in no sense a division of purpose or interests.* The attendance was large, twenty states being represented. Resolutions were received from the Eclectic Medical Association of Pennsylvania, declaring the recent conflict in the House of Representatives of that state a high-handed attempt to trample upon and overturn the natural and personal rights of all not belonging to the ranks of the dominant school, and part of a general conspiracy to impose a medical yoke upon the people of the United States, a general plot of the American Medical Association and the professional mediocrity which it represented, to get arbitrary power, and do other acts unworthy of men, or of loyal and patriotic citizens. Dr. Williams, of Alabama, explained at length the position of the Medical Law of Alabama, which was virtually an incorporating of the Code of Ethics into the enactment, and enabled one individual† to dominate in the State Medical Board and transact its entire business. The "Arena of Debate" had been continued, and discussions were held upon Specific Medication and Conservative Surgery.

Resolutions were adopted in relation to the disaster at Johnstown, in Pennsylvania, and in honor of Doctors Lemon T. Beam and William C. Beam, who had perished in the flood. An eloquent letter of acknowledgment was received from Dr. B. L. Yeagley.

The following officers were elected: William T.

* "I remember," said he, "when in 1844, the vote of New York made your own townsman, James K. Polk, president, although the vote of his own state was cast against him. Again, it is a report, that in our own North, with its schools, progress and intelligent citizens, many of them are voting for Jackson still."

† Dr. Jerome Cochran, a former Botanic physician and graduate of the Botanical-Medical College of Memphis, but now an active prosecutor of his former associates.

Gemmill, of Ohio, President; Doctors John W. Pruitt, of Arkansas, Francis H. Fisk, of Tennessee, Thomas Garth, of Iowa, Vice-Presidents; Alexander Wilder, Secretary; Dr. James Anton, Treasurer.

The Association convened the next year at the International Hotel, in Niagara Falls, New York, on the seventeenth day of June. Dr. Robert A. Gunn, President of the Eclectic Medical Society of New York, delivered the address of welcome. The regular order of sections had been resumed, and employed the session with the general approval of the result. The meeting was regarded as the most successful of all yet held. On motion of Dr. H. C. Gazlay, of New York, the Association adopted the following resolution:

Resolved, That Dr. Alexander Wilder be and is hereby requested to prepare a History of Medical Reform during the earlier periods, under the authority and sanction of the National Eclectic Medical Association.

Dr. Gunn proposed that the publishers of the *Medical Tribune* be authorized to print the work in their series, and thus relieve the Association from the expense. The Executive Committee was authorized to make the necessary agreements.

The following officers were elected for the next year: George Covert, M. D., Wisconsin, President; Doctors Benjamin L. Yeagley, of Pennsylvania, William F. Curryer, of Indiana, Marquis E. Daniel, of Texas, Vice-Presidents; Dr. Alexander Wilder, Secretary; Finley Ellingwood, of Illinois, Corresponding Secretary; Dr. James Anton, Treasurer.

The twenty-first annual meeting took place at Hot Springs, in Arkansas, beginning on the sixteenth of June, 1891. The societies of seventeen states were

represented out of a total number of twenty-five. A letter was received from Dr. Anton, resigning the office of Treasurer, and Dr. William T. Gemmill, of Ohio, was elected. The session was devoted to professional subjects in the sections, and was marked by an extraordinary addition of new members. The Eclectic College of Physicians and Surgeons of Indiana, was admitted to the number recognized by the Association.

Protests were received from the Societies of Wisconsin, Missouri, Arkansas and Connecticut, against the proposition of the American Medical Association for Congress to create a Cabinet Officer to have charge of all matters relating to the public health. It was pleaded that the measure was not demanded by the people, or by any public necessity; that it would be no less than the establishing of a useless executive department, with a swarm of subordinate officers "to prey upon the people, and eat out their substance;" that it was to be in the interest of an exclusive class in order to assure their own position in the nation, to employ the strong arm of the Federal government for selfish and partisan ends, to establish a medical corporation after the model of a national religion, which the Federal constitution inhibits; to create a privileged class in the government, and to secure offices of emolument for favored members of that class, incompetent to practice the Healing Art successfully, or to compete with the more liberal members of the medical profession. The Association adopted a resolution pledging coöperation with this purpose.

Another imporant subject received attention. In commemoration of the discovery of America, by

Christopher Columbus in 1492, the Congress of the United States had provided for a "World's Fair" to be held at the city of Chicago in 1893, at which the various departments of Science, Industry and Human Progress generally, should be represented. A Committee was accordingly authorized to confer with the World's Fair Commission, with a view to the establishing of a Department of Eclectic Medicine, Surgery and Pharmacy, at the proposed Columbian Exposition; and to ascertain what concessions would be made and privileges given to this Association to encourage it to establish such a department.

The officers were elected for the next year as follows: William F. Curryer, M. D., of Indiana, president; Doctors James M. Park, of Arkansas, Marquis E. Daniel, of Texas, and N. L. Van Sandt, of Iowa, vice-presidents; Dr. Alexander Wilder, Secretary; Dr. John V. Stevens, of Wisconsin, corresponding secretary; Dr. William T. Gemmill, of Forest, Ohio, treasurer.

Doctors Finley Ellingwood, George Covert, and John V. Stevens, with the president and secretary, were appointed the Committee to confer with the World's Fair Commission with a view to the establishing of a Department of Eclectic Medicine, Surgery and Pharmacy at the Columbian Exposition.

The twenty-second annual meeting took place at the Olympic Theatre, in the city of St. Louis, Missouri, beginning on the fifteenth day of June, 1892. Nineteen states were represented by delegates, who afterward became members. The Mayor, Hon. E. A. Noonan, delivered an address of welcome, to which the secretary replied. Dr. Albert Merrell also welcomed the Association in behalf of the Eclectic Medical Societies of the City and State of Missouri. An important amendment to the By-Laws was adopted in rela-

tion to the term of study to be required at medical colleges. It prescribed that every candidate for the degree of Doctor of Medicine shall be twenty-one years of age, that he shall have pursued the study of medicine four years under the supervision of a reputable physician or in a reputable medical college, and shall have attended at least three full terms of instruction of at least five months' duration, the last of them in the college conferring the degree.*

The question of obtaining a department in the Columbian Exposition was the topic of debate. The Committee did not report except verbally, and the matter was difficult to comprehend. There was a "World's Congress Auxiliary" organized with a president and secretary, and provision made for three departments, General Medicine, Homœopathy and Eclectic Medicine. The opportunity to hold the session would come in the month of May.† The Association on motion of Dr. S. B. Munn of Connecticut, adopted a resolution to take part in the holding of a Department in the World's Congress Auxiliary and a committee was appointed consisting of three ladies and three men to confer with the Auxiliary Committee at Chicago in relation to the arrangements.

Another resolution was adopted in relation to Life Insurance Companies, protesting against their practice to refuse to employ Eclectic physicians for examiners, and proposing to withhold support from such companies.

The following were the officers elected: Benjamin Lincoln Yeagley, M.D., of Pennsylvania, president; Doctors Albert Merrell of Missouri, John C. Butcher of Ohio, and

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* The Association from its re-organization, had devoted attention to the prolonging of the term of medical study, amidst much evasion and opposition, and now fixed its attitude beyond dispute.

† Only the Eclectic and Homœopathic Auxiliary Congresses were held. The other, on some pretext, drew out of the arrangement, and would have no more to do with the matter.

Laura L. Randolph of Illinois, vice-presidents; Alexander Wilder, secretary; Dr. John V. Stevens of Illinois, corresponding secretary; Dr. William T. Gemmill of Ohio, treasurer.

World's Eclectic Medical Congress.

After several attempts at effecting an arrangement of preliminary matters, a conference was held at Chicago, on the twenty-ninth of November, 1892. There were in attendance members of the Executive Committee of the National Association, and of the several Committees of the World's Congress Auxiliary of the Congress of Eclectic Physicians and Surgeons. It was agreed that the two bodies should act together in the holding of the Congress upon the condition of equal interests in the enterprise and the maintaining of the dignity and integrity of each. The twenty-third Annual Meeting of the National Eclectic Medical Association was held accordingly in Chicago in the Memorial Art Building, beginning on the thirtieth day of May, 1893. Sessions were held daily for business during the week, but no election of officers took place.

Journal of the Congress.

The World's Medical Congress Auxiliary of Eclectic Physicians and Surgeons commenced at the Memorial Art Building in Chicago, on the twenty-ninth day of May, 1893.*

The session was formally opened by the Hon. Charles C. Bonney, president of the World's Congress Auxiliary. He then announced the Eight General Divisions of the Department of Medicine and Surgery.

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*The World's Medical Congress Auxiliary of Homœopathic Physicians and Surgeons and the National Institute of Homœopathy, also held sessions in the same building, simultaneously. Both were thus admitted to the great platform of the hall, and duly recognized as having by full title, a place among learned and scientific bodies.

It was the first time in Medical History, he remarked, that separate Medical Congresses had met in the same building in fraternal relations, with sincere respect for each other, and extending to each other the courtesies demanded by the Golden Rule of Conduct. This meeting of these several medical bodies, he trusted, was an indication of the coming unity of the whole Profession of Medicine. The coming physician will not confine his attention to the routine of a single School of Practice, but intelligently and fraternally comprehend all. The physician who is entitled to the highest honors of his calling will be the one that can, with justice, make it his boast that he has suffered nothing to escape his attention in which experience has taught any useful lesson for the cure or prevention of illness.

In these Congresses of Medicine and Surgery, Woman, he was glad to say, had at last her conspicuous and appropriate part. The Committee of Organization had been made up, one of men, and another of women, acting both separately and in co-operation, and they had prepared the program, aided by the advice of an Advisory Council.

Mr. Bonney then welcomed the members and introduced as president of the Congress, Dr. Milton Jay.

After the formalities of replying had been concluded, in which the members of the several Committees participated the General Order of Business was announced. Dr. Wilder the Secretary of the National Association delivered an address setting forth the History and Principles of the American Eclectic School of Medicine. Dr. Yeagley, the president, also delivered his Annual Address. The Rev. Jesse H. Jones of Mississippi, pronounced an eulogy upon the late Doctor William Byrd Powell.

The work of the Congress had been classified in six Divisions, namely:

DIVISION A.—*Practical Medicine.* JOHN M. SCUDDER, President; Harvey B. Laflin, Vice-president; Edwin M. Ripley, Secretary.

DIVISION B.—*Gynæcology and Obstetrics.* ELIZABETH G. SMITH, President; George W. Boskowitz, Vice-president, Lorenzo E. Russell, Secretary.

DIVISION C.—*Materia Medica and Therapeutics.* ALBERT MERRELL, President; John Fearn, Vice-president; Annette J. Shaw, Secretary.

DIVISION D.—*General Pathology.* WILLIAM F. CURRYER, president; Lyman Watkins, Vice-president; Vincent A. Baker, Secretary.

DIVISION E.—*Diseases of the Nervous System.* HERBERT T. WEBSTER, President; Elam H. Stevenson, Vice-president; Hannah S. Turner, Secretary.

DIVISION F.—*General Surgery.* ROBERT A. GUNN, President; William M. Durham, Vice-president; Henry Long, Secretary.

The sessions of the Congress were continued through the week with an increase of interest, and made ample demonstrations of the merits of the Eclectic School of Medicine. The leading members, both in America and the other hemisphere, contributed papers, and in those Divisions in which discussions were permitted, these were among the most valuable features of the proceedings. The Journal and papers of the Congress were afterward published by joint authority of the Committees, as the "*Columbian Volume*" of the Transactions of the National Eclectic Medical Association.

LATER MEETINGS OF THE NATIONAL ASSOCIATION.

The Twenty-fourth Annual Meeting of the National Eclectic Medical Association was held in the International Hotel at Niagara Falls, New York, and began the sessions on the

nineteenth day of June, 1894. Dr. Yeagley the president was unable to attend * and Dr. William E. Bloyer was elected to preside till the arrival of Doctor Butcher, the Vice-president. A memorial from the Eclectic Medical Society of Utah, asked help to aid against persecution under the medical statutes of the state. The Iowa Eclectic Medical College was removed from the list of recognized medical institutions, and the Medical Department of Cotner University at Lincoln, Nebraska, was admitted to such recognition for a year.

An Eclectic Medical College Association was authorized, to be composed of two delegates from each of the recognized colleges; and the Standing Committee on Affairs of Medical Colleges was empowered to sanction any action which the College Association might take.

The following officers were elected, namely: Vincent A. Baker, M.D., President; Doctors Cicero M. Ewing of Pennsylvania, George W. Johnson of Texas, and Malachi A. Carriker of Nebraska, Vice-presidents; Dr. Alexander Wilder, Secretary; Dr. John V. Stevens of Illinois, Corresponding Secretary; Dr. William T. Gemmill of Ohio, Treasurer.

The Twenty-fifth Annual meeting was held at the Fountain Spring House in Waukesha, Wisconsin, and began its session on the nineteenth day of June, 1895. Less than the usual amount of professional work was transacted; many of the Sections failing to be organized. Resolutions were dis-

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* Dr. Yeagley transmitted his Annual Address to the Association and it was read by the Secretary. It was his last official act. He continued to fail in health and died at Johnstown, Pennsylvania, on the fourteenth day of January, 1895. It was justly said of him that "he strengthened the Eclectic organization while he ornamented it; he acted from principle and not from personal motive or selfish advantage." He read men like open books. In his character he greatly resembled his kinsman, the late President Lincoln; and for fidelity, probity and sincerity, he was not excelled. He was certain to do the right thing, to make the right decision, and all with admirable tact and gentleness. To the writer he was a true and warm friend, such as is seldom found.

cussed relating to the propriety of legislation to prohibit the sale of cigars and cigarettes; also, declaring that the present method of Medical Examining Boards is not in accord with the spirit of American freedom and progress, and should be reformed in its procedures or abolished outright. Dr. Edward B. Foote of New York, sustained the latter resolution, which evoked strong discussion. A vote was finally taken, which resulted in eleven voices in favor and twenty-eight against.

The officers elected for the ensuing year were as follows: William E. Bloyer, M.D., of Ohio, President; Doctors George W. Johnson of Texas, Herschel E. Curry of Oregon, and Harriet C. Hinds of New Jersey, Vice-presidents; Dr. William E. Kinnett of Illinois, Secretary*; Edwin H. Carter of Iowa, Corresponding Secretary; Dr. William T. Gemmill of Ohio, Treasurer.

The Twenty-sixth Annual Meeting was held at the rooms of the Chamber of Commerce at Portland, Oregon, beginning on the sixteenth day of June, 1896. The address of welcome was made by Dr. W. S. Mott of Salem. Members were in attendance from thirteen states. The officers elected for the next year were as follows, namely: Daniel Maclean, M.D., of California, President; T. Willis Miles of Colorado, and Harriet C. Hinds of Illinois, Vice-presidents; William E. Kinnett of Illinois, Recording Secretary; Pitts E. Howes of Massachusetts, Corresponding Secretary; William T. Gemmill of Ohio, Treasurer.

The Twenty-seventh Annual meeting was held at the Hotel St. Louis at Lake Minnetonka, Minnesota, and began its sessions on the fifteen day of June, 1897. The members were welcomed by the governor, the Hon. R. M. Clough,

* Before a ballot was taken Dr. Wilder declined an election to the office.

and by Mayor Pratt of Minneapolis. A poem was also read by Lucy Sherman Mitchell welcoming the Association in behalf of the Authors' Club of the city. Members were in attendance from eleven states, and the session was principally devoted to the reading and discussion of papers read in the several Sections. Officers for the next year were elected, namely: Edward J. Farnum, M.D., of Illinois, President; Doctors David Williams of Ohio, J. T. McClanahan of Missouri, and Warren L. Marks of Michigan, Vice-presidents; Dr. William E. Kinnett of Illinois, Recording Secretary; Dr. Pitts Edwin Howes of Massachusetts, Corresponding Secretary; William T. Gemmill of Forest, Ohio, Treasurer.

The Twenty-eighth Annual Meeting was held at Creighton Hall in Omaha, Nebraska, the session beginning on the twenty-first day of June, 1898. The address of welcome was made by the Mayor, the Hon. Frank E. Moores. Members were present from seventeen states, and the session was devoted to the reading and discussion of professional papers by the Sections. Among them was one by Dr. John K. Scudder of Ohio, on the "Attitude of Life Insurance Companies toward Eclectic Physicians." It appeared that no general discrimination against Eclectic Physicians existed; thirty-two not discriminating at all, seven evading inquiry, but giving every preference to Examiners belonging to the Old School; four openly declaring that only Old-School physicians were employed, and twelve making no reply to questions. At the same time, Dr. David A. Strickler of Denver, Colorado, Chairman of the Bureau of Life Insurance Examination for the American Institute of Homœopathy had sought to show in 1897, that there was unusual discrimination against Homœopathic physicians by most of the large companies in twenty of the largest cities in the United

States. A digest of the Medical Statutes of several states and territories was also presented by Dr. David Williams of Ohio.

The following officers were elected for 1898–99, namely; David Williams, M.D., of Ohio, President; Doctors Warren L. Marks of Michigan, John T. Clanahan of Missouri, and J. A. McKlveen of Iowa, for Vice-presidents; Dr. Pitts Edwin Howes of Boston, Massachusetts, Recording Secretary; Dr. E. Lee Standlee of Missouri, Corresponding Secretary; Dr. William T. Gemmill of Ohio, Treasurer.

The Twenty-ninth Annual Meeting held its sessions at the Hotel Cadillac in District of Michigan, beginning on the twentieth day of June, 1899. The address of welcome was made by the Hon. William C. Maybury, Mayor of the city. It was eloquently delivered and treated upon the "Lost Arts" in medicine, hygiene and anæsthesia. These the ancients possessed, he remarked; but they were lost because men in that archaic periods did not come together as now. He extolled the change in practice. "A spavined horse and a few ounces of calomel, more or less, are not now considered the equipment of the best physician." The mayor also paid a tribute to the advance in surgery and to the high merits of the trained nurse.

The address was answered in fitting terms by Dr. Alexander Wilder of New Jersey. After that the Association proceeded to the order of business. The following officers were chosen for 1899–1900, namely: George W. Boskowitz, M.D., of New York, President; Doctors Milburn H. Logan of California, Nathaniel A. Graves of Illinois, Philander B. Wright of Michigan, Vice-presidents; Dr. Pitts Edwin Howes of Boston, Massachusetts, Recording Secretary; Dr. E. Lee Standlee of Missouri, Corresponding Secretary; Dr. William T. Gemmill of Forest, Ohio, Treasurer. The annual

meeting for 1900 was appointed to be held at Atlantic City, New Jersey, on the nineteenth day of June.

The Thirtieth Annual Meeting was held at the Hotel Dennis in Atlantic City, New Jersey, beginning on the nineteenth day of June, 1900. The address of welcome was delivered by the Mayor, Hon. F. P. Stoy, and answered by Dr. C. Edwin Miles of Boston, on the part of the Association. The professional business of the Association was very thoroughly transacted, and the Sections were successfully handled. Courtesies were exchanged with the National Institute of Homœopathy then also in session at the City of Washington, and the Association was cordially invited to attend at the unveiling of the statue of Samuel Hahnemann at the National Capitol. Dr. John Uri Lloyd of Cincinnati, also announced that from the sale of a work of his, the proceeds which he had dedicated for the purpose, had been sufficient in amount to enable the erecting of a monument to the memory of John King, the friend of Dr. Wooster Beach, and a pioneer of Eclecticism in Medicine. The Association was also out of debt, and with about six hundred dollars in the Treasury.* The following officers were chosen for the coming year: President, E. Lee Standlee, M. D., of Missouri; Vice-Presidents, Doctors Joseph D. McCann, of Indiana, A. B. Young, of Tennessee, J. R. Duval, of Georgia; Secretary, Dr. Pitts Edwin Howes, of Boston, Massachusetts; Corresponding Secretary, Dr. Nathaniel A. Graves of Ill.; Treasurer, Dr. William T. Gemmill, of Forest, Ohio. The next annual meeting was appointed to be held at Chattanooga, Tennessee, beginning on the third Tuesday in June in the year 1901.

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* Justice requires the matter to be correctly stated. The National Association was entirely free from debt in 1892. But the holding of the World's Congress in 1893, entailed a heavy expenditure for printing the Columbian Volume and incidental matters. An appeal was made to members to contribute a dollar and a half each to meet the outlay, but only a small number responded. President Yeagley and others advanced a sum amounting to several hundred dollars, but it was insufficient. Since that time, on the motion of Dr. S. B. Munn, the annual dues were increased from three to five dollars, which has enabled the Association to cancel the indebtedness. But no just imputation of mismanagement or unwise extravagance can rest against any one in the matter.

CHAPTER XV.

Eclectic Medical Colleges and Medical Societies.

The movement in 1868 and 1869, to effect the rehabilitating of the National Eclectic Medical Association, was attended by a rival attempt in the city of Philadelphia; and so, about the time of the meeting in Chicago for that purpose in 1870, the *Eclectic Medical Journal*, published by Dr. John Buchanan, gave the account of an organization by that name, in that city, with its proceedings. It indicated the support of auxiliary societies in many of the states, leading Eclectic physicians and all the accompaniments of a large and prosperous society. It is foreign to our purpose to deny or dispute the existence of all these things; but letters addressed to individuals named in connection with the movement, have been answered by disavowals of any connection with the matter. It is not easy now to find a reliable trace of these societies, except in the periodical published in Philadelphia. The late Rev. Matthew Hale Smith was announced as president, with a formidable array of associate officers. The Eclectic Medical College of Philadelphia, was the nucleus of the affair, and its certificates of membership were scattered abundantly, both in America and Great Britain. As the fortunes of the College and its manager waned, the Association and even its memory faded away.

Another rival organization likewise existed for several years, which for a time bade fair to prove formidable. The preliminary steps were taken in 1879. The National Eclectic Medical Association met that year at Cleveland, Ohio, and its proceedings created considerable disaffection. Two members had been summarily expelled in a manner that was considered too hasty, and the Eclectic Medical College of St. Louis, was disowned. It was intimated that the management of this procedure was arbitrary and unparliamentary, that usages were followed that were adopted from the Old School, and the rights of individuals were not properly regarded. Several amendments were accordingly made to the Constitution to afford greater protection. The new organization elected the late Dr. Morgan L. Filkins of New York, president, and adopted a constitution and course of procedure. Its second meeting was not significant. In 1881 it met at St. Louis simultaneously with the National Eclectic Association, and elected Dr. Orin Davis of New York, president. This meeting was well attended, but after this the Association speedily fell to pieces. The Board of Health of Missouri rejected the physicians graduating from the Eclectic Medical College, and the futility of the attempt to maintain a rival society was manifest.

Survey of the Field.

The rehabilitating of the National Eclectic Medical Association at Chicago, seemed to impart new energy to physicians of the American School of Practice, both in regard to local organization, and in the extending of facilities for medical instruction. At that time there were but five medical colleges professing to teach the Eclectic Practice of Medicine. Of these, only two participated in the new organzation, while a third, as has been noticed, being in unpleas-

ant circumstances, was intimately connected with a project to found a rival society under the same name, in order to anticipate and circumvent the action at Chicago.

There were also Eclectic Societies in fourteen states* most of them in active sympathy with the National Association. The number has since increased till there are now thirty-two Societies and Associations representing the Eclectic physicians in the several states,† with local and district organizations in twelve, and seven medical colleges that are admitted to representation at the meetings of the National Eclectic Medical Association. There is also the New England Eclectic Medical Association, comprising the six Northeastern States; and it has been proposed at different times to form another society of States on the Pacific Slope, a Southern Eclectic Medical Association and another for Northern States. This increase is largely due to professional enthusiasm, the *esprit de corps* of individual practitioners, incited by the influence of a central organization, and further stimulated, when not checked and neutralized by partisan legislation.

The Eclectic Medical Colleges.

There has always been an earnest purpose among Eclectic physicians to provide for thorough instruction in the principles and procedures of the new Practice. Personal ambition may have been an incitement on the part of those participating in these enterprises, but it has been allied to conviction of the necessity of medical institutions to enable

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* These were in Connecticut, Illinois, Indiana, Iowa, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New York, Ohio, Vermont and Wisconsin. The officers of the Bennett College of Eclectic Medicine and the Eclectic Medical College of the City of New York were also active in the undertaking and probably deserve the highest meed of credit for its success.

† *The Medical and Surgical Register* from the edition of 1896 omits mention of the Eclectic Medical Associations of Alabama, the District of Columbia, Minnesota, New Hampshire and South Dakota.

the holding of the ground, and to make further advancement. In face of the fact that they have all been undertaken and carried on without aid from the public Treasury, endowment from private munificence, or any sources of income other than those incident to an academy or private school, they have succeeded in equipping a body of practitioners not surpassed in skill, professional merit and success by those who have graduated from more popular and favored institutions.*

The American Medical College of St. Louis was the first of the number coming into existence after the Eclectic reörganization at Chicago. It was incorporated in 1873, and included in its Faculty, Doctors George C. Pitzer, Edwin Younkin, Albert Merrell, John W. Thrailkill, W. V. Rutledge and George H. Field. Dissension unfortunately arising, a division ensued and Dr. Field procured a charter next year for "The American Medical University." This name was soon changed to the less equivocal title of the "St. Louis Medical College," and sessions were begun in 1875. The two institutions continued to exist in an unfriendly rivalship for several years. The matter was presented before the National Eclectic Medical Association at its meeting in Detroit in 1878, and its decision was made in behalf of the American Medical College. The other enterprise continued in operation till 1883, when it was rejected by the Board of Health of the State of Missouri. The American Medical College has since maintained its place in public confidence, and it is in a thriving condition.

The United States Medical College was incorporated by the Supreme Court of the First District of the State of New

* The late Professor Joseph R. Buchanan proposed as a test of this question, the enacting of a law which should require every physician signing a death-certificate, to add the designation of the School of Medical Practice to which he belonged. This, he insisted, would be more effective than all the medical legislation to weed out quacks and incompetent practitioners, and would afford to the people the means of intelligent judgment in selecting their physicians.

York in 1878. Dr. Benjamin J. Stow was president, and Doctors Robert A. Gunn, Paul W. Allen, Alexander Wilder, A. B. Woodward, P. H. Van der Weydé, David Wark and Mark Nivison, constituted the Faculty. The College was recognized by the National Eclectic Medical Association in 1879, on motion of Dr. John M. Scudder, and held six terms of lectures. It was the first Eclectic institution that attempted the holding of a graded course of instruction, and it received its students by a preliminary examination. This college was incorporated under the same General Statute as the Central New York College at McGrawville, the Syracuse University, the Central and Syracuse Medical Colleges. The statute having been amended by the Legislature in 1870 on purpose to include colleges and universities of whatever character, and to be unequivocal, it named such institutions. At the instance, however, of the Medical Society of the County of New York, a writ of *quo warranto* was obtained to test the validity of the charter. The Superior Court of the County hesitatingly decided the general statute with its amendments insufficient, the Judge intimating his expectation that the decision would be overruled. The Supreme Court, however, at the General term, made the new point that the law did not contemplate the incorporation of medical colleges, and the Court of Appeals finally declared that "a medical college is neither a scientific nor a literary but simply an eleemosynary institution" and therefore not entitled to the powers conferred by the general act for the incorporation of benevolent, charitable, religious, scientific, etc., societies, the statute under which it had been incorporated.

The degrees which had been conferred were legalized, however, by a special act of the Legislature. A bill was also passed to incorporate the college, but the Governor

David B. Hill, withheld his signature, and the institution passed from existence.

The California Eclectic Medical College was organized at Oakland in 1879, and was admitted in 1880 by special resolution to representation in the National Eclectic Medical Association. The Faculty included the late Dr. Joseph H. Bundy, the chief pioneer Eclectic physician of California,* Dr. J. W. Webb, Dr. A. McRae, Dr. John Fearn, Dr. George G. Gere, Dr. Herbert T. Webster and Dr. Daniel Maclean. Several of these are still in active service. The college encountered a severe shock in the death of Dr. Bundy, but recovered and began a prosperous career. In 1888 it was removed to San Francisco. It has the distinction of being the only Eclectic Medical College on the "Pacific Slope."

The Georgia Eclectic Medical College at Atlanta was incorporated in 1866. The devastation of the war between the States had fallen with the severest weight upon Georgia and particularly upon the capital city. In this period of general impoverishment the college began its existence. Its projectors had energy and enthusiasm to sustain them rather than financial resources. The attempt was made to begin a course of medical instruction in the autumn of 1866, but Professor I. J. M. Goss † demurred on account of the inefficiency of the provision for its support. The organization,

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* Joseph Horatio Bundy was born in Hardwick, Vermont in 1839. After receiving a literary Education in Wisconsin, he graduated in Medicine in Philadelphia in 1861. He removed to Colusa in California in 1870, where he soon became conspicuous for his advanced studies in Herbalism and his vigorous efforts to disseminate the knowledge of Eclectic Medicine. In 1878 he transferred his residence at Oakland in order to take part in the organization of the Eclectic Medical College. He was for ten years a Professor of the Theory and Practice of Medicine, and likewise of Medical Botany, a department sadly neglected in medical colleges. He was elected First Vice-President of the National Eclectic Medical Association at its meeting in Detroit in 1879. His health began to fail and he was compelled to give up active effort. He died at Seattle, Washington, on the 6th of October, 1881.

† Dr. Isham J. M. Goss died at Marietta, Georgia, his place of residence, February 25, 1896. He was born in 1819 and graduated in Medicine, first at Augusta in 1844, and afterward at the Eclectic Medical College of Philadelphia, and the Eclectic Medical Institute. He was the author of a treatise on Materia Medica and contributor to medical journals.

however, was maintained, and finally in 1877 a Faculty was duly formed and stated courses of lectures were begun.* The indications were more encouraging. In 1881, a formal application was presented by Dr. Borland in behalf of the Faculty and Trustees, at the annual meeting of the National Eclectic Medical Association at St. Louis, to be recognized among the colleges in good standing. It was referred to a Special Committee,† and a recommendation reported to defer the matter. The Association, however, adopted a resolution offered by Dr. R. A. Gunn of New York, to give the college together with the Eclectic Medical College of Indiana, a recognition for one year, as in good standing, and to leave the ultimate decision till the next annual meeting. The application was renewed by Dr. William M. Durham of Atlanta, in 1882 at the annual meeting in New Haven, and met the desired approval. Dr. Durham remained in the Faculty as Professor of Surgery, and the College became steadily more prosperous.

In 1874, the "Reform College" at Macon which had been suspended during the war, was revived with the new title of "The College of American Medicine and Surgery." It was removed to Atlanta in 1881, and merged in 1884 into the other institution, which in 1886 adopted its present name of "The Georgia College of Eclectic Medicine and Surgery.‡ It is the only medical college of the Eclectic School in the Southern States.

The Indiana Eclectic Medical College was established at Indianapolis in 1880, under the auspices of the Eclectic

* Among the Professors were Doctors W. H. P. Fishburn, the Dean; John R. Borland of Pennsylvania, Joseph Adolphus, the former president in turn of Indiana and Iowa Eclectic Medical Associations, John F. Hammond, I. J. M. Goss, H. R. Jewett.

† Doctors John M. Scudder, H. Wohlgemuth, George C. Pitzer, J. Beswick Schultz and L. E. Russell composed the Committee.

‡ Several of the Annual Amendments of this institution adopted accordingly the date of the original incorporation of the Botanico Medical College at Forsyth in 1839, and claim the distinction of being the oldest Eclectic Medical College. To Dr. W. M. Durham must be accorded great credit for the success enjoyed.

Medical Association of the State.* It sustained a course of lectures the same year. Its application for recognition among the Eclectic medical colleges as being in good standing was presented to the National Eclectic Medical Association, at its session in St. Louis in 1881, and strenuously opposed. It was, however, before mentioned, accepted conditionally for one year, together with the Eclectic Medical College of Georgia. This precedent which was devised in order to evade a difficulty, was afterward regarded by several as a rule and practice; but there never had been a regulation of the sort, even by implication. The resolution adopted in 1879, relating to medical colleges, had a far different end in contemplation, which many did not contemplate.

There was, however, much dissension among the Eclectic physicians of Indiana and rival institutions came into existence. The Beach Medical College was organized in 1883, taking the name of "The Beach Medical University" the following year, but soon afterward merged into the older institution. The Indiana College of Medicine and Midwifery united with the Eclectic Medical College, retaining its own distinct corporate existence, but becoming the department of midwifery in that institution.† The management of the College, however, became unsatisfactory to the Indiana Eclectic Medical Association, and it finally adopted resolutions disowning the whole concern. At its instance, likewise, the National Eclectic Medical Association took similar action at the annual meeting at Niagara Falls in 1890.

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* The officers of the College were selected from the oldest and staunchest Eclectic physicians of Indiana. The late Dr. William H. Kendrick, a former Baptist clergyman, and a man of experience and scholarly attainments, was president; Dr. Samuel S. Boots, Recording Secretary, and Doctors Elias Hubbard, Lyman Frazee and Daniel Lesh, Trustees. Among the members of the Faculty were Doctors John A. Henning, S. S. Boots and William F. Curryer.

†Diplomas purporting to be from the Medical College of Midwifery were issued as genuine, on which the most of the official signatures were engrossed together with the text of the documents.

There was, however, another course of lectures held, after which the managers suspended further operations.

It was revived again in 1895 under the name of "The American Medical College of Indianapolis," with a full staff of professors belonging to the different schools of medicine. It represented the "American Association of Physicians and Surgeons," a non-partisan medical organization, which had been formed about this time, and has held annual meetings since in different states of the Union.

Meanwhile a committee of members of the Indiana Eclectic Medical Association called a meeting of physicians in September, 1890, and took measures to procure a charter and begin a course of instruction under the title of "The Indiana College of Eclectic Physicians and Surgeons." The Association promptly approved the action and accepted the proposition to name three of the trustees each year. Its faculty was constituted from the leading Eclectic practitioners of the States* and the College received due recognition this time without question at the meeting of the National Eclectic Medical Association, at Hot Springs, in 1891.

The lines of the new College, however, fell by no means in pleasant places. Dissensions broke out, and after fruitless attempts to compose them, the sessions were suspended in 1895.

In Iowa, likewise, the attempts to establish a medical college have been numerous and the results by no means encouraging. In 1881 the executive officers of the Drake University authorized the establishing of a medical department in that Institution. Doctors Hiram A. Reid, H. Oliver Conway and other members of the Iowa State Eclectic Medical Association accordingly organized such a depart-

*Among the number were Doctors William F. Curryer, Henry Long, Augustus P. Hauss and Philander B. Wright.

ment under the covenant and title of "The Iowa Eclectic Medical College," and began a course of instruction.* The National Eclectic Medical Association, at its annual meeting at Topeka, Kansas, in 1883, adopting the policy followed with the colleges in 1881, gave a conditional approval for a year.

A rival institution, the "King Medical College," was then incorporated, and its president, Dr. Oliver H. P. Shoemaker, made application at the annual meeting of the National Eclectic Medical Association at Cincinnati, in 1884, for a similar recognition. Both colleges were finally accepted for a year in the same relation, but their petitions for full recognition at the meeting in Altoona the next year were refused, and they were left in their former attitude. The matter was taken up again at the annual meeting in Atlanta, in 1886, and resulted in the accepting of the medical department of Drake University, which then bore the title of the "Iowa Medical College."

This discrimination, however, had no effect towards a termination of the controversy; new complications now arose. At the meeting of the National Eclectic Medical Association at Waukesha, in 1887. Dr. Shoemaker renewed his application without success. Meanwhile, a communication was received from Dr. John Cooper of Des Moines, Iowa, stating that the Drake University had for just reasons, severed all connection with the Iowa Medical College, and that the State Board of Health had rejected its graduates. The Association adopted a resolution withdrawing its official recognition, and declaring further that no medical college in Iowa shall be recognized except one

*The next year the "Iowa College of Physicians and Surgeons" was established on a similar footing, and the Eclectic School having been brought to a hasty termination, it has continued to retain the relation solely.

that shall be fully sanctioned by the Iowa State Eclectic Medical Association.

The same year the "Iowa Eclectic Medical College" was organized, and its president, Dr. John Cooper presented an application for recognition, with the certificate of approval as required. It was referred to the Committee on Affairs of Medical Colleges.* A favorable report was made and the new corporation accepted. It was no more fortunate than its predecessors. It soon incurred the hostility of the unfriendly Eclectic practitioners, and a vote was obtained, it was affirmed, by a snap judgment, to reject its diplomas. The College was compelled, accordingly, to close its doors, after having held six terms of instruction. A resolution was adopted at the meeting of the National Eclectic Medical Association at Niagara Falls in 1894, withdrawing its recognition from the College till such time as the State Board of Health of Iowa shall accept its degrees.

In 1883 the Legislature of Nebraska authorized the establishment of three medical departments in the University at Lincoln for instruction in the doctrines and procedures of the leading Schools of Medicine. Three professorships were alloted to the Eclectic Department, to which Doctors William S. Latta, Ira Van Camp and Richard S. Grimes were appointed. The arrangement continued till 1887, when the departments were all closed. Dr. Latta and his colleagues immediately negotiated with the Nebraska Christian University, since changed in name to "Cotner University," for the organization of a medical department in that institution, and the sessions began in 1889 with a staff of fourteen professors. It bears the title of "Lincoln Medical College of Cotner University."

*This Committee consisted of Doctors B. L. Yeagley, W. T. Gemmill, S. B. Munn, J. W. Migrath and Henry Wohlgemuth. Thus far it was the policy and purpose that this committee should represent the Association, and accordingly include no person as member who was connectcd with a medical college.

The Michigan Eclectic Medical College was incorporated in 1880, but was never acknowledged by the National Eclectic Medical Association, nor by the Eclectic Medical and Surgical Society of the State. It did not go into operation.

The Eclectic Medical College of Maine was incorporated by the Legislature of the State on the 28th day of February, 1881. The enterprise had been contemplated by the principal members of the State Eclectic organization for many years. After the later years of the war between the Northern and Southern States, there was a new impulse in the ranks of Eclectic physicians, to form societies for the advancing of their views, and protection against encroachments upon their professional rights. Accordingly the Eclectic Medical Society of Maine was formed in June, 1865, and incorporated three years afterward. There was at the time no medical college, nearer than Philadelphia, the exponent of their principles. The institutions in New York and Massachusetts had closed their doors, and the Philadelphia University had repudiated all connection with the Eclectic school. The new Society was active and took effective means to oppose the attempts in Legislature to foist restrictive legislation anew upon the State.

The want of a medical college to teach Eclectic practice was vividly experienced and anxiously discussed at the meetings of the Society, but its energies were employed in the efforts to prevent unfriendly legislation. Finally in the winter of 1880-81 Dr. James M. Buzzell, of Portland, took the laboring oar to bring the result. He was a graduate of Dartmouth, and was a surgeon of superior skill. He had been professor of surgery in the Worcester Medical Institution, the Eclectic Medical College of Philadelphia and the Medical University. A petition was prepared and signed by

the leading citizens of the State* asking for the incorporation of the Eclectic Medical College of Maine, at Lewiston. The charter was granted and an organization effected immediately. The faculty consisted of Dr. James M. Buzzell, Professor of Surgery; Dr. Wilbur F. Wadworth, Professor of Principles and Practice of Medicine; Dr. John Swan, Professor of Obstetrics; Dr. John J. Siggins, Professor of Materia Medica and Gynecology; Dr. Albert J. Marston, Professor of Anatomy; also, a Professor of Chemistry and a Lecturer on Medical Jurisprudence.

The first session began in October, 1881, with twenty-three students. The second term was marked by changes of instructors, Dr. Seth B. Sprague succeeding to the chair of practice, Dr. Benjamin H. Burrill, to the chair of Materia Medica, Dr. Stephen E. Root, to the chair of Physiology. While the Medical School of Maine was fostered by the Legislature, receiving an annual stipend from the treasury for its support, the modest institution at Lewiston depended, like other schools of the Reformed Practice, entirely upon its income and the aid of its friends. The attempt was made that year to procure a medical statute and swoop the College into the hands of the dominant school. It was happily foiled and the College came out of the conflict with more friends than before. The Eclectic Medical Society at its next meeting declared its warm approval of the institution and asked support from every loyal friend of the Eclectic cause.

The College now enlarged its operations, engaging a better building, and adding to its faculty Dr. James Davies, A. M., to the chair of Chemistry and Urinology, Dr. James A. Tabor, General and Microscopic Anatomy, Dr. Francis

*The Hon. James G. Blaine was a friend and sympathizer with the Eclectic movement, as were other citizens of note. Perhaps in no other state, except Georgia, were so many leading public men in rapport with the Eclectic School of Practice.

W. Lockwood, Operative Dentistry, and Dr. Darius L. Powe, Demonstrator of Anatomy. The institution now exhibited gratifying indications of greater prosperity than ever.*

The scientific character of the instruction at the College is best illustrated by an address of Dr. John M. Boothby, a graduate and afterward a member of the Faculty: "This College has sent out graduates," said he, "who have defeated graduates from Harvard, Yale and the University of the City of New York in rigid examinations for prominent positions; and we are recognized by the physicians of New York, as all physicians should be, not for our 'pathy, but for our medical knowledge."

The number of annual sessions held by the College was six. Its curriculum was as extensive as other medical schools, and the graduates were held rigidly to the line. Nominal attendance and superficial attainments were not accepted. But the changes in the faculty were unfortunately numerous. The College being without endowment, few teachers could long afford to render their services. Doctors Lindsey, A. K. P. Harvey, A. D. Muchmore, John M. Boothby and Messrs. Atwood and A. S. Lambert succeeded to places in the Faculty at the fifth term, and Doctors A. L. French and A. G. French to the sixth. Dr. Henry Reny was Demonstrator of Anatomy.

All was going on as usual, when an article appeared in the Boston Herald in January, 1887, which was based upon false representations, insinuating that the College was in close relations with the "Druidic University" at Lewiston.

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*It was at this period that Dr. Samuel York, *né* Carlton, was a member of the Board of Trustees. He was not an educated man, but adventurous, and after several voyages, had finally established himself as head of an "Electric Infirmary" at Lewiston. He now offered himself as a candidate for graduation. The result was a difference of sentiment in the faculty and several professors vacated their chairs. Dr. York himself afterward resigned the office of Trustee. He became afterward hostile and his influence and reputation were factors in wrecking the College.

The Legislature appointed a committee to investigate the matter, and the Faculty and Trustees were summoned to the sessions. They neglected to attend, and the Legislature naturally supposing the imputations correct, repealed the act of incorporation.

In 1883 the University of Florida was established at Tallahassee. Dr. John Kost, a veteran of the Botanic School and former professor in the Reform Medical College at Cleveland, Ohio, as well as editor of a medical journal, was active in this matter. At his instance a medical department was connected with a full staff of instructors. Dr. Kost himself and Dr. Vincent A. Baker, both experienced teachers of the earlier time, were prominent members of the Faculty. The encouragement to the enterprise was insufficient and the institution was removed to Jacksonville two years later to no advantage, and was closed the next season.

The project of an Eclectic medical college at Topeka was confidently entertained in 1883 by the leading members of the Eclectic Medical Association of Kansas. At that time the organization was very prosperous, sustaining a medical journal and rapidly growing in numbers. A cloud, however, fell on the movement and it was abandoned.

The proposition to revive the Worcester Medical Institution has been several times discussed at the meetings of the Eclectic Medical Society of Massachusetts. The charter has been carefully maintained in full force, but the Trustees have never been confident of the expediency of the measure.

The Eclectic Medical College of New Jersey was incorporated by the Legislature in 1871. The late Dr. Luke D. Broughton was principal mover in the undertaking. A Faculty was created in 1888, and several terms of instructions were held with success. Misunderstandings arose

between the Trustees and Professors, and the Institution being established in the midst of an unfriendly community, the Legislature repealed the act of incorporation.

There have been several medical colleges set in operation at Cincinnati, that had more or less claim upon attention. Such has been the case since 1849. The merging of the College of Eclectic Medicine into the Eclectic Medical Institute, at the outbreak of war between the States, resulted for a time in the cessation of such movements. The maintaining of a college and medical journal had become too hard to sustain, and most of the colleges of the several Reform Schools were closed. In 1875, however, the Physio-Eclectic Medical College was organized. It held terms of instruction for three years and was then united with the "American Eclectic Medical College of Cincinnati." The National Eclectic Medical Association at this time revised its Constitution, and required certain conditions of study and qualifications from the colleges within its premises.* The Eclectic Medical Institute obtained recognition from that body. A suit was instituted against the new college upon the ground that it had no legal existence, and the charge was made against it of selling medical degrees. The case, however, was dismissed. The institution was again set in operation a few years afterward at half the regular terms of instruction, but encountered new embarrassments, and was again suspended.

The Eclectic Medical College of Pennsylvania remained in operation till 1880. Such of the medical societies as had affiliated with it quietly severed the alliance or silently went out of existence. The Iowa Eclectic Medical Association

*This action contemplating longer terms, more thorough study, and a higher standard of attainments, as a condition of securing the degree of Doctor of Medicine was taken at the annual meeting in 1877 at the instance and insistence of the author, then the Secretary. It was evaded at first in several of the colleges, and even defied, but finally carried. A resolution of amnesty was adopted in 1879, under which five colleges were formally recognized.

openly denounced its course. The Eclectic Medical Society of the State of New York, at the annual meeting in 1869, renewed the prior action, and voted to refuse acknowledgment of the validity of its degrees. A committee was also appointed to enquire into the facts, and the Legislature of Pennsylvania passed a bill to repeal the charter, but this was found to be in violation of the Constitution of the State, and therefore of no effect.

Dr. John Buchanan had procured an Act from the General Assembly of the State in 1867, incorporating "The American University of Medicine and Surgery at Philadelphia." A diploma of graduation was prepared for it, closely resembling in form and general appearance that of the Philadelphia University of Medicine, of which Dr. William Paine was dean. The story was then put into circulation that both institutions were engaged alike in the practice of hawking their diplomas.

About this time Doctor Paine was involved in some political complications, and his enemies, in order to bring him into disrepute, had procured the appointment of a Committee of the General Assembly, to investigate allegations against the Philadelphia University in regard to the corrupt disposing of medical degrees.* It had been affirmed that individuals in the confidence of officials of the said medical colleges, aided the Committee in these endeavors. They failed utterly however, in obtaining evidence of any irregular procedure of the kind. In spite of this, nevertheless, an Act was passed to annul the charter of the institution, but it was set aside by Justice Agnew of the Supreme Court of Pennsylvania, as being without legislative force and void.

*Several official personages had engaged in a scandalous transaction in regard to a sum of money, which had been paid by the Federal Government to the State of Pennsylvania in the adjusting of claims pertaining to the war between the States. Doctor Paine had possession of documentary evidence in regard to the matter, and having refused to give it up, this measure was employed on purpose to embarrass and discredit him.

In 1879 the Hon. Andrew D. White, the American Ambassador to Germany, addressed a communication to the Hon. William M. Evarts, Secretary of State, directing his attention to the fact that diplomas of spurious character, purporting to confer degrees from certain medical colleges of the United States, were in possession of individuals in that country, who had not been pupils. The letter was referred to General Carl Schurz, the Secretary of the Interior, and by him placed in the hands of General John Eaton, the Commissioner of Education. General Eaton immediately addressed a circular letter to educators and others, asking their aid to expose and correct the evil. The result was, that the Eclectic Medical College of Pennsylvania and its associate, "American University," were shown to have been engaged in the issuing of the spurious degrees. The attempt was made by several public journals and others, to implicate the Pennsylvania Medical University, and the Philadelphia University of Medicine, but nothing of the kind was brought to light against either.

Nevertheless, here the investigation came to an end. Other medical colleges had been engaged in the traffic, but they found means to turn attention in other directions. Yet the fact is notorious, that degrees have been granted in Europe in such a way for centuries, ever since the first Doctor of Medicine was made, eight hundred years ago; and likewise, that colleges in the United States had disposed of their degrees for many years before the Eclectic Medical College of Pennsylvania had even an existence.*

*The author was at the time Secretary of the National Eclectic Medical Association. He had been the President of the State Society of New York in 1869, when that body took action against the diploma traffic. On receiving the circular from General Eaton, he at once offered his assistance, only stipulating that the investigation should be thorough and impartial, and in no sense a simple attack upon a particular School of Medicine. This, General Eaton distinctly assured him would be the case. He then suggested as a means of putting an end to the traffic, that the practice of granting degrees in absence should be terminated. The Commission replied that this was impossible, as it had been

The adversaries of the several liberal colleges in Philadelphia, conceived this to be their opportunity, and the purpose was formed to force them out of existence. A writ of *quo warranto* was issued against the Philadelphia University. The Board of Trustees received the information that the charges which had been made against the institution could not be sustained, and that the sole desire of the Commonwealth in this proceeding was that the charter should be surrendered without prejudice or the imputation of any blamable act. The Trustees, naturally desirous to escape a costly and profitless lawsuit, assented to this proposition and gave up the charter accordingly. The Hon. F. Carroll Brewster described this event as not a victory upon the merits of the case, and declared further that the corporation "Surrendered nothing but the vain and empty right to manage a literary institution."* Mr. Brewster meant by this term a medical college, an institution such as the Court of Appeals of New York afterward affirmed to be neither literary or scientific, but eleemosynary.

A prosecution was also begun against the corporations, the Eclectic Medical College and the American University. It has been affirmed and with apparent truth, that these two enterprises had been kept in operation by counsel and contribution from members of the other School of Practice.

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a practice of long standing in European institutions. In fact, the actual grievance was simply that American institutions were participating in the profits of a time-honored Old-School practice. Hence, as soon as the slight had been fixed upon the Eclectic colleges in Philadelphia, which had been discredited over ten years by the Eclectic Medical Societies themselves, and the implication of their misdoing could be imputed to other Eclectic medical colleges the investigation ceased altogether. The medical colleges of the other schools were passed over, although common report had indicated several, as thus culpable; some of them of acknowledged superior standing. In one instance, Dr. St. John B. Roosa of New York, was said to have declared that a certain medical college, which he specified, had sold more diplomas than the managers of the Eclectic Medical College of Pennsylvania. Statements like this have been repeatedly made and never disputed.

*Dr. Paine, the chief founder of the University, always insisted till the day of his death that this surrender had no validity, and that the University with all its powers had still a legal existence.

If such was the case, the ends were never accomplished. The two institutions passed out of existence, Thus ended the Eclectic Medical College of Pennsylvania, after a career of thirty years.

The Pennsylvania Medical University survived a year longer, but finally closed its doors in 1881.

The Eclectic Medical Association of Pennsylvania, at its annual meeting in Philadelphia in 1886, took the preliminary measures toward the establishing of a new college, and a charter was accordingly procured for the "Burton Medical College." The endeavor to obtain subscriptions to guarantee the success of the enterprise, did not meet sufficient encouragement; and the death of several of the most active and prominent of the Eclectic physicians of the State, and likewise the stress of the times, resulted in the abandoning of the project.

The Connecticut Eclectic Medical Association also resolved, at its annual meeting in 1892, to take the necessary action for the establishing of a college. The causes, however, which have impeded activity elsewhere, have also been operative there, and the matter is still in abeyance.

The *Medical and Surgical Register*. published in 1896, gives the name of the "Wisconsin Eclectic Medical College" at Milwaukee. It was organized in 1894 with a full staff of professors, and graduated a class in 1896. It is not recognized, however, by the Wisconsin Eclectic Medical Society, and appears to be in affiliation with the Health College of Chicago.

The National Eclectic Medical Association, at the annual meeting at Niagara Falls in 1894, adopted resolutions for the forming of an "Eclectic Medical College Association," and empowering the Standing Committee on Affairs of Medical Colleges to ratify any action that should be taken

by the proposed organization. This will operate very effectively in future to determine the prospects and opportunities of future projects for the founding of institutions for instruction of students in the Eclectic School of Medicine.

NEW AUXILIARY SOCIETIES.

The stimulus which was imparted by the success of the movement for the reviving of the National Eclectic Association at Chicago in 1870 soon led those who had before held aloof and been indifferent, to perceive the importance of allying themselves with the movement. The more immediate result, accordingly, was the forming of new auxiliary organizations, and greater zeal in promoting the further advancement of the American School of Medical Practice.

The Eclectic Medical Association of Kansas was organized in February 1871. Doctors Ansel M. Eidson, George H. Field, Noah Simmons and Daniel Surber were among the active organizers. The Society was steadily moving forward, and gaining in membership, when, in 1879, a statute was enacted by the Legislature authorizing the creation of a Board of Medical Examiners, the members of which were to be named by an incorporated medical society. It had been contemplated by the framers and advocates of the measure to place the whole power of licensing physicians in the hands of the practitioners who had been efficient and active in procuring such legislation. But it was decided by the Attorney-General of the State that the Eclectic Medical Association was the only society that met the conditions of the enactment, and possessed the required authority. The Association proceeded, accordingly, to put the powers into exercise, and gained thereby a large increase in the number of its members. A decision, however, was procured from the Supreme Court of the State declaring the enactment unconstitutional. Since that time endeavors have been repeatedly

made to procure legislation which shall provide for a composite Board of Medical Examiners, arranged to give numerical preponderance to the School of Physicians asking for this enactment. So far, however, they have failed.

The late Dr. J. H. Bundy is entitled to the chief credit for bringing the Eclectic School of Medicine into notice in California. Emigrating thither from Wisconsin in 1870, he speedily became interested in the indigenous Flora, their scientific character and classification, and their medicinal uses. Like Rafinesque and other true lovers of knowledge, he sought information everywhere, of the Spanish population, and any who could tell anything worth the learning. He began at once to contribute papers to the Eclectic Medical Journals, and soon attracted wide attention to the new remedies which he described. Among them were the Yerba Santa, Grindelia, Berberis, the Rhamnus or Cascara Sagrada and Yerba Reuma. Of course, they were immediately decried for having been introduced by a physician who was not of the "regular" profession. This common, but whimsical, objection was soon overborne by their manifest utility, and they became "official."

Other Eclectic physicians came into the State and the importance of organization was soon perceived. Accordingly, the Eclectic Medical Society of California was formed in December, 1874, by Doctors M. F. Clayton, O. P. Warren, F. C. Cook, J. P. Backesto, M. R. Tewksbury, L. B. Hoag and Samuel Clark. It soon gained a large membership, and constituted the bone and sinew of Eclectic Medicine on the Pacific Coast. The attempt was made at the next session of the Legislature to procure an enactment for the avowed purpose that every trace of "irregular medicine" might be swept from the State. The members of the new organization were awake to the inevitable complaint, and took ener-

getic action. As the result of their effort the statute, when it came from the hands of the Governor, provided for a Board of Examiners for each State Medical Society that had a legal organization, to investigate and certify to the qualifications of the practitioners identified with its School of Practice. During the many years that have elapsed since this measure has been in operation there has been an attempt at every session of the Legislature to procure the abolition of the several Boards and the substitution of a single Board in which the Eclectic and Homœopathic physicians would have only a minority of the members. This result was to be averted because it could not be depended upon for impartial action. But the Eclectic physicians have been on the alert to check the endeavor.

In Michigan the easy-going ways of the Eclectic Medical Society were unsatisfactory to many of the leading physicians. They desired more careful attention to the character and qualifications of members. A new organization was formed accordingly in 1876, which was incorporated by the Legislature by the name and title of "The Michigan State Eclectic Medical and Surgical Society." It was recognized the same year by the National Eclectic Medical Association at its annual meeting at Washington, and has been ever since the representative body; the other ceasing to maintain an organization. It has been aggressive, and made repeated, though unsuccessful, efforts to obtain from the Legislature a department of Eclectic Medicine in the University at Ann Arbor on equal terms with the department for the teaching of Homœopathy. These have been, however, of later years, greatly relaxed, if not abandoned outright.

The history of the Eclectic movement in Missouri presents some analysis to submit on occurrences in other States.

The pioneer Eclectic physician of the State was Dr. William M. Gates, a self-taught man who graduated in medicine and began practice in Adair County in 1854. When the Missouri Eclectic Medical Association was formed in 1870, he became its Secretary. The bitter professional jealousy that characterized the relations of the several Schools of Medicine in the different States, as for example in Ohio, Michigan, Pennsylvania and other Commonwealths, was less virulent in Missouri, making it easier to obtain a permanent foothold. The establishment of two rival medical colleges at St. Louis, which has already been described, had the effect, however, to divide the Eclectic practitioners into two parties, and "the Eclectic Medical Society of Missouri" was formed and incorporated under the influence of the American Medical College. An application to be accepted as the true auxiliary organization representing the Eclectic physicians of Missouri, was presented to the National Eclectic Medical Association at its meeting in Detroit in 1878, and it was duly received the ensuing year at the meeting in Cleveland. It is still in vigorous operation, and has been one of the most efficient of the State societies in the work of establishing district organizations in the State and otherwise promoting the cause of Eclectic Medicine. Both the Society and the American College adhere closely to the views and doctrines promulgated by the founders and earlier exponents of the American School of Practice.

The Eclectic Medical Association of Nebraska sent its first delegation to the National Association at its annual meeting in Detroit in 1878. Its representatives on that occasion were Doctors William S. Latta, James H. Woodward and Charles Band.* It had been several years in ex-

*Dr. Latta was elected president of the Association at its annual meeting in St. Louis in 1881. Doctor Band was for many years a generous contributor, giving a hundred

istence, and demonstrated its effectiveness by defeating the endeavors to procure a partisan medical statute from the Legislature, and likewise by securing a department of Eclectic Medicine, first in the Nebraska University, and afterward in the Christian University of New Bethany.

The Eclectic Medical Society of New Jersey was organized in Newark in 1873. It began with about thirty-five members, and has held semi-annual meetings regularly since that time. The geographic situation of the State, and the jealousies remaining from the former relationship of medical colleges, operated prejudicially toward the organization. The physicians favoring the institutions at Philadelphia and those having preferences for the institutions in New York, were distrustful of one another, and soon abandoned the Society to the members who held no exclusive allegiance in either direction. The meetings have been characterized by the reading of instructive papers and discussions of professional topics. This Society took measures at an early day for the exposing of the traffic in medical degrees, both in the Old and New Schools, and its committee on Legislation for many years opposed successfully the concerted efforts to foist a medical enactment upon the statutes, till at length political and sinister influences united and became too powerful.

The history of Eclectic Medicine in Pennsylvania has been greatly diversified. The introduction of the Botanic medical practice from England, the early organizations centering at Philadelphia, and the story of the medical colleges with their various vicissitudes have been already noticed. They seem, however, to have had comparatively

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dollars yearly to the National Association, besides generous donations to the American, United States and other Eclectic Medical colleges. He was a resident of Crete, but removed afterward to Eugene, in Oregon. His address, however, is still given as Crete.

little influence upon the Reformed physicians of the counties of the State. Many of these, indeed, were graduates of the Colleges in Philadelphia, and loyally took warm interest in their prosperity while they continued in operation. But they exemplified the fact, which many are slow to learn, that the general public will seldom be partisan, or care much even as spectators, in the quarrels of individuals. They preserved a reasonable affection for the places and teachers, but they were diligent in local organization and activities.

The Eclectic medical practice was introduced into Western Pennsylvania by Doctors Oldshue and Henry Yeagley, and in the Valley of the Susquehanna by Dr. A. B. Woodward. Local societies were organized at Pittsburg and in the Susquehanna district as early as 1845, and continued in full vigor for many years. After the revival of the National Eclectic Medical Association at Chicago the movement to form an Auxiliary Society for the State was begun at Oil City. Among those active in the matter were Doctors Alexander Thompson, John R. Borland, of Franklin, and James L. Proper, of Titusville. The Eclectic Medical Association of Pennsylvania was duly organized, and afterward incorporated at Franklin in 1875. It had for auxiliaries the Central, North Western, Susquehanna district and Philadelphia. It had the influence for years to defeat the efforts which the Pennsylvania Medical Association and the Faculty of the University employed, under the trite pretext of protecting the people, with the aid of political chicane to procure an enactment by which to control absolutely the Practice of Medicine in the State.* A statute was finally obtained

*Among the active members of the Eclectic Medical Association at this time were the Thompsons, the Beams, the Yeagley brothers, G. D. Kughler, Henry B. Piper, C. M. Ewing and the veteran A. B. Woodward.

which gave the several medical colleges the exclusive right to determine the validity of degrees conferred by institutions outside of Pennsylvania. This power was exercised to the extreme of professional partisanship, and even to the rejection of diplomas of institutions of the same medical faith. This peculiar form of State Rights was maintained till 1892, when the Legislature enacted a new statute authorizing the appointment of three Boards of Medical Examiners, to be nominated by the respective State Medical Societies.

The Georgia Eclectic Medical Association was organized in March 1874, and incorporated by a special act of the Legislature the same year.*

At that period the principal Reformed physicians of Georgia were graduates from the medical college at Macon, and supporters of the Botanic School of Medicine. Nevertheless, they generally affiliated with the new organization; Dr. Lanier Bankston, the pioneer in Reform and college enterprise in the State, himself, exemplifying his approval. The two medical colleges also united, and so became a powerful auxiliary to aid the Eclectic School of Practice in securing and maintaining a firmer foothold in Georgia and the neighboring States. It now enjoys a large share of the favor of the public men of the State, and in some respects there appears to be less animosity between the different parties in medicine. The influence of the Eclectic physicians has been effectual in the way of checking effort for partisan legislation; and at the same time they have been far in advance of the other medical organizations in demanding longer terms of study and thorough instruction at the medical colleges.

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*The first officers were representative men of the Eclectic School. Dr. Isham J. M. Goss was president, S. T. Biggers, vice-president, and Hiram J. Hampton, secretary. The later officers have been men of equal note; the Hon. Fielding T. Powell having been president for several terms, and William M. Durham, secretary.

In Alabama the history of Eclectic Medicine has been marked by conflict and other incidents full of significance. The war between the States and the unfortunate conditions which ensued, had gone far toward annihilating the animosities between physicians of the different Schools of Practice. Indeed, in several of the counties all the practitioners had declared themselves Eclectics, and modified their treatment accordingly. As, however, there was no medical college convenient of access that gave instructions in the doctrines and procedures of Reformed Medicine, students continued to attend the institutions of the other School. Besides these, there were many physicians who had graduated before the war from the Botanic Medical and Reform colleges, who, nevertheless, were affiliated with the dominant party. One of this number was Dr. Jerome Cochrane, who had been active at that period in the conventions and controversies of the Thomsonians. He had now become Health Officer of the State. A medical enactment was procured from the General Assembly in 1877 which classified physicians as Regular and Irregular, and gave the entire power of licensing practitioners to the Board of Censors of the County Medical Societies. At that time there were no societies of this character in many of the counties, but the effect of the enactment led to their formation, and the income derived from the fees exacted for examination of candidates supported them in existence. It was soon found, however, that many of these examiners were grossly illiterate and unable to examine a candidate intelligently, or even to prepare his certificate. In order to obviate this difficulty changes were artfully made in the statute by which supreme and almost absolute power was given to a State Board, and of this the Health Officer was virtually the umpire. It issued its regulations to the local

Boards and set up an assumption of authority which was esteemed as arrogant and imperious.*

The first resistance was encountered from the Eclectic Medical Association of Alabama. This Society had been formed in 1884 by the late Doctor J. W. Raleigh Williams, of Opelika; R. J. Thornton, William H. Lamar and others of like sentiment. It at once proclaimed its hostility to "State Religion, State Medicine and a State Medical Priestcraft." A Central Protective Committee was appointed which proceeded to test the validity of the obnoxious provisions of the medical enactment. As an immediate result two indictments were quashed which had been found against members of the Committee in order to be made a judicial decision including the constitutionality of the measure. Afterward, however, in 1889, a suit was brought against a Homœopathic physician who had refused to undergo an examination, and the Supreme Court at Mobile ruled unequivocally that he had violated no statute that would subject him to criminal prosecution. This decision put an end to further prosecutions of recusant physicians, and to the enforcing of examinations by Boards of Censors in Alabama.

The statute as modified prescribes that "no person shall be permitted to practice any irregular system of medicine without a certificate of qualification in Anatomy, Physiology, Chemistry and the Mechanics of Labor, from some one of the Boards of Censors" of the medical societies of the dominant School. It has not been undertaken, unless the Courts have ventured upon it, to define what may constitute an "irregular system of Medicine."

The endeavor was made in 1892 by the Eclectic and Homœopathic physicians acting in concert, to procure from

*It was said that Dr. Cochrane declared the diplomas of medical colleges to be merely "door-mats."

the General Assembly a radical change in the statute itself. Their purpose was to secure protection from invidious persecution. It failed, however, in the House of Representatives, lacking two votes of the necessary majority.*

The Medical Association of Alabama proceeded in haste to modify its position. A resolution was adopted at its next session to hold the inhibitions of the Code of Ethics as set forth by the American Medical Association to be no longer obligatory, and the offer was made to accept as regular physicians all who were legal practitioners of medicine. This is the condition of membership in the various International Medical Congresses which have been held in Europe, for many years past.

To these propositions the Secretary of the Eclectic Medical Association of Alabama made the following reply:

"Eclecticism demands to be her own umpire, to constitute the sufficient authority for her own licentiates, to exercise unquestioned the right to pursue her own path, equal before the law. She places her claims by the side of all other scientific pursuits; and every blow that she strikes for herself, every demand that she makes, IS A BLOW FOR THE FREEDOM OF EVERY CITIZEN, AND IN BEHALF OF THE SISTERHOOD OF LABOR."

The Eclectic Medical Association of Arkansas was organized in 1879. Dr. John W. Pruitt of Russellville took the lead in the undertaking.† Another organization of similar character was also formed through the efforts of the late Dr.

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*Dr. Williams declared to the author that it was a mistake to apply for any enactment. If they had made the effort for the unconditional repeal of the medical statute he was certain that it would have been accomplished. "There will be no backward step," he added. But the brave man's career was arrested at the opportune moment. Dr. Williams died on the third day of January, 1874.

†Doctor Pruitt was a graduate of the Eclectic Medical Institute in 1858, and became afterward a surgeon in the Confederate Army. He was a man of superior energy, and with the stalwart character of the pioneer to do and to endure.

M. F. Dumas. The two united and soon acquired the dimensions of a strong and effective society. The medical conflict in the State had been a severe one, and it was intrepidly fought. The advocates of medical legislation distinctly avowed their purpose, that their "chief aim was to organize so as to successfully control Eclectics and Homœopathics." The active members of the Eclectic organization, Doctors E. H. Stevenson, A. J. Widener and others were on the alert to meet every attempt. The bill providing for a Board of Medical Examiners, exclusively of the favored School, was repeatedly introduced and defeated. Senator Fishback, afterward Governor, opposed it with all his energy. It was the purpose, without concealment, to drive the Eclectic physicians from the State. Finally, in 1881, an enactment was procured creating a State Board of Medical Examiners, but it was expressly forbidden to discriminate between the Schools of Medicine. This deprived them of the power for which they had looked. In 1895 the Legislature passed another act, placing the whole business of examining physicians in the hands of the County Courts. Governor Fishback refused his approval, but it was again passed by the Legislature. The Courts of each county were authorized to appoint a Board of three Examiners, two of whom must be graduates in medicine. No School of Practice is indicated in the statute.

In other respects the Eclectic physicians of Arkansas have been very fortunate. They maintain their numbers, and many of them possess superior literary merit. They publish the Transactions of their Society in pamphlet, and sustain the *Southwestern Medical Journal.*

In Texas it has required persistent effort to establish and maintain an organization of the new School. The dimensions of the State are too large, the population too diversified,

and other conditions are so complicated as to be deterrent to the undertaking. Hence, with veterans like Meredith W. Henry, David Bates and E. W. Aldrich, years passed without an attempt at organizing. The Constitution of the State had been framed with a provision to assure equality of rights to physicians, declaring in express terms, that "no laws shall be made giving any School of Medicine the advantage over another." A bill was enacted by the Legislature in 1879 authorizing the appointment in every judicial district of a Board of Medical Examiners, who should be graduates of a college approved by the American Medical Association, but they were prohibited from any partisan discrimination. The feeling among the physicians desiring legislation is very warm against those of the Eclectic and Homœopathic Schools, and this enactment was not sufficient for their purpose. An attempt was made in 1884 to procure a statute for the creation of a State Board of Censors, composed of members of the Texas Medical Association. It was proposed to invest this Board with full powers to decide upon the qualifications of candidates, and to license practitioners of Medicine. It did not pass, but it served to warn physicians of the weaker Schools that they must act together to enable effectual resistance to encroachments upon their professional rights. A meeting was held at Dallas the ensuing winter, at which was formed "the Eclectic Medical Association of Texas." For several years it did not seem to prosper, and barely maintained its existence. Presently, however, a new impulse was imparted, and it began to exhibit abundant evidence of vital energy. The attendance at the meetings, the papers there read and discussed, and afterward published, afford gratifying testimony of steady advancement in professional skill and scholarship.

The professional animosities, however, still exist in all acerbity. The members of the Texas Medical Association, unable to disfranchise and drive away the Eclectic physicians, but compelled by law to regard them as equals, have concerted together to withhold those courtesies which characterize the manners and relations of good breeding. Such things, however, are only for a season, and will ultimately be superseded by good sense.

In Tennessee, as in many other States, the cause of Reformed Medicine has displayed the kaleidoscopic phases incident to an organization that has been subject at different periods to varying influences. The Botanico-Medical College and the Memphis Medical Institute had already, before the breaking out of war in 1861, supplied physicians to every part of the State, whose skill and success as practitioners won favor and popularity for the New School. The tendencies of military conditions, however, made it possible in Tennessee, as in the other States, to procure aggressive legislation, that was before impractable where the instinct of liberty was keener and predominant. The feeling became active in various quarters "that the Eclectics and Homœopathists ought to be suppressed by law." Accordingly, the attempt was made year by year in the General Assembly to procure the enactment of a bill to regulate the practice of medicine by placing it under the control of the Tennessee Medical Association. Then the pretext, so frivolous and substantially untrue, was put in circulation that the medical enactments of other States were inducing unqualified practitioners to migrate into Tennessee. The Eclectic physicians were long able to exercise influence to defeat the various attempts.* They were slow, however,

* "A few of us," says Dr. W. H. Halbert in 1885, "a few made a fight against medical legislation in this State, and will continue to do so. I had a copy of Professor

to perceive the importance of organization. The Tennessee Eclectic Medical Society was formed in 1877, but for several years sustained only a precarious existence. It seems to have imposed as a test the acceptance of the doctrine of Specific Medication, and many Reformed physicians held aloof. The difficulties were finally obviated, and the necessity for organized action was more generally recognized. The Society was incorporated in 1887, and afterward exhibited greater activity.

The Eclectic Medical Association of Kentucky was organized in 1882, and for several years displayed much energy. There was also a City Society at Louisville, but it has long since ceased to hold meetings. In 1890 action was begun which resulted in the formation of the West Kentucky Eclectic Medical Society, and since that time a State organization has been brought into existence. It was formed at Paducah in 1897, and has an increasing membership, chiefly in the western counties of the State.

There have been several organizations in West Virginia, which existed for a time, and then disappeared. A Society was formed at Brownstown in October, 1870, of which Dr. Daniel Mayer of Charlestown was president. It promptly affiliated with the National Eclectic Medical Association which had been set on foot at Philadelphia by Dr. John Buchanan, and shared its fate. In 1893 the Eclectic Medical Association of West Virginia was organized, and immediately began to rally to action the practitioners of the State. It bids fair to become an important factor in future years.

The Oregon Eclectic Medical Society was organized at Salem on the fourth day of September, 1890. It has not a numerous membership, but the physicians are in the prime

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King's address (of 1884) placed in the hands of every member of the Legislature, and also sent a copy to each of our Supreme Judges."

of life, active and resolute. It is growing steadily in numbers and influence, and the future prospects are encouraging.

The Eclectic Medical Association of the State of Washington was also formed in 1890. Its efforts were greatly impeded by the financial depression of subsequent years, which fell with special severity upon the inhabitants of that State, and led many physicians to remove elsewhere. The distance, likewise, between their residences operated to deter from attendance at the meetings, and the Association languished. A new impulse, however, has arisen, and there is now abundant evidence of renewed activity.

The Eclectic Medical Association of Colorado was also organized in 1890, and duly represented at the annual meeting of the National Eclectic Medical Association, at Hot Springs in Arkansas. For two years it appeared to be in a flourishing condition, but it succumbed to the financial depression of 1893. A flourishing City Society of Denver yielded likewise before the same storm.

The Eclectic physicians of Utah organized in 1892, before Utah had become a member of the American Union. The Eclectic Medical Society was duly incorporated on the fourteenth day of March, and immediately encountered the hostility of the other School. A statute was enacted by the Legislature creating a Board of Examiners. Prosecutions were immediately begun against the Eclectic physicians, while others were passed over unnoticed. The diplomas of the Eclectic Medical Institute and other Eclectic Medical Colleges were rejected by the Board as fraudulent and of no value. The conflict was carried on in the Courts for some time, and finally the Society closed its career.

A State Eclectic Medical Society was also organized in South Dakota, and incorporated, in June, 1891. It continued in active operation several years, but under adverse conditions, and finally ceased to hold meetings.

There has also been an Eclectic Medical Society for several years at the National capitol. Doctors Thomas A. Bland and Magnus L. Julihn were its first officers. When the National Eclectic Medical Association met at Washington in 1876, there was but a single physician in affiliation with it in the city; but a change was effected, and through the great energy of Dr. Bland, an effective organization was brought about. It made full sway of its influence by an effectual resistance to proposed Congressional legislation to regulate the practice of medicine by placing the Eclectic and Homœopathic practitioners under the supervision of their adversaries. The present statute gives an equal opportunity to all Schools. The partisan lines are closely drawn in the District of Columbia, as was shown at the International Medical Congress in 1887, and it will require fortitude, persistence and profound conviction to sustain a movement beside an establishment rooted in political as well as social conditions. What has been done was bravely done.

There are as yet no organization of Eclectic physicians in the other States and Territories of the American Republic, namely: Alaska, Arizona, Delaware, Florida, Hawaii, Idaho, Louisiana, Maryland, Mississippi, Montana, Nevada, New Mexico, North Carolina, North Dakota, Oklahoma, Rhode Island, South Carolina, Virginia, Wyoming. In several of these, the organizing of Societies may be a matter of time only, but in others it is very improbable.

The project of forming Medical Societies for districts including several of the States of the Union, has been several times entertained. The early Botanic physicians had a New England Association, in which the late Calvin Newton and others in affiliation with him, were active members. There was also a Southern Association, embrac-

ing the States south of Pennsylvania. There are now a Mississippi Valley Medical Association, and also several Homœopathic Medical Societies of this character. It has been proposed several times to form Eclectic Medical Organizations in the same style, for the States of the Pacific Slope, those of the Southwest, and in the North.

The New England Eclectic Medical Association, however, is the only project of the kind that has come into actual operation. It was formed at the State House in Montpelier on the sixth day of June, 1895. Dr. Wilbur F. Templeton of New Hampshire, was elected president, and H. N. Waite, secretary. The Association was incorporated by the Legislature of Vermont in November, 1896, naming as charter members, Doctors Herschel N. Waite of Johnson, and Henry J. Potter of Bennington, Vermont; William E. Fleet of Cambridge and Frederick Wallace Abbott of Taunton, Massachusetts; Darius L. Powe of Providence, Rhode Island; Stephen B. Munn of Waterbury and Jonathan D. S. Smith of Bridgeport, Connecticut; William C. Hatch and Theophilus J. Batchelder of Machias, Maine. The Association has met regularly in the different States, and is an important factor in Eclectic Medicine in the East. It has now under consideration the establishing of a Medical College.

The number of Eclectic physicians in the United States can hardly be estimated with more than proximate accuracy. Many who profess to belong to the Eclectic School make use of the medicines and procedures employed by practitioners of other Schools, ignoring more or less those which are set forth in Eclectic publications; and many who are identified with the rival Schools have adopted more or less the Eclectic procedures and medicines, often after classing these as having been originally introduced by their

own associates. These facts make it less easy to distinguish. Many, besides, who have been instructed in Eclectic medical colleges are reckoned and recorded as belonging to other Schools of Practice; some from having changed their sentiments, and others for reasons of a different character, It has been quite common to enumerate Eclectic physicians at as high a rate as fourteen thousand; but a critical computation by Dr. John K. Scudder gives the following numbers of the respective Schools, namely: Old-School, 73,028; Eclectic, 9,703; Homœopathic, 8,640; Physio-Medical, 1,553. Of course, as few comparatively have the *esprit de corps*, or professional enthusiasm requisite for the purpose, only a limited number is enrolled in the various organizations, or taking interest in any form of associate action.

CHAPTER XVI.

BOTANIC AND ECLECTIC MEDICINE IN ENGLAND.

To Nicholas Culpepper must be accorded the distinction of having been among the first to propound a system of Herbal Medication in England. His treatise, "*The English Physician*," contained a full description of the medicinal plants common and indigenous in the British Islands, with their specific virtues. It is really a treatise upon "Simples" or domestic remedies, as it has been common to designate vegetable medicines. Many of these are well known also in the United States, having been brought over by emigrants and traders.

One feature in this book presents a curious appearance in these our later days. The planet and the astral "house" to which the plant belonged were given as an essential fact. This was an important matter at that time. It should be remembered that from the earliest ages of which we have any trace or record, astrology had been considered as an indispensable adjunct to medical learning, and that it was taught accordingly to students of Medicine at all the universities of Europe. "Medicine is in the power of the stars, and is ruled and protected by them," says Hohenheim. From Hippokrates to Kircher, Huyghens, Bacon, Tycho Brahe and Keppler, this belief was entertained. The prevalence of such notions is exhibited in many of our common words, like *aspect*, *ascendent*, *consider*, *contemplate*, *disaster*, *jovial*, *venereal*, *mercurial*, *martial*, *saturnine*. Cul-

pepper was skilled in Alchemy, and in occult as well as medical learning.

The first edition of his work was published in London in 1650, and it has been several times reprinted. It met with very general favor among all classes, and had a great influence not only in enabling the "plain people" to care for those about them with remedies that were both safe and effective, but also toward the forming of a School of Practitioners who employed Herbal remedies exclusively.

Culpepper by no means confined his labor to the exposition of a vegetable Materia Medica. He likewise published books on the *Anatomy of the Body of Man*, with illustrations, a translation of *The New Dispensatory*,* a *Directory for Medicines*, and Galen's *Art of Physic*, with comments. He was, as will be perceived, a liberal scholar as well as a broad thinker.

Doctor Woodward, a physician of London, also published a treatise in 1718, entitled; *The State of Physic and of Diseases*, which embraced a field similar to that of Samuel Thomson's *Guide* of a century later. It was widely circulated, and was highly esteemed. Botanic Gardens came into favor, and we find one mentioned in the ninth edition of the Encyclopædia Britannica, which was maintained and cultivated by a lady named Elizabeth Blackwell.

Indeed, Botanic physicians were sufficiently numerous in England in the Eighteenth Century to attract respectful attention. Doctor Thornton gained a wide popularity in and around London. A student of his, Dr. John B. Howell, emigrated to America in 1793 and introduced the Botanic

*Medical books, as well as the lectures in the universities, were in Latin. One of the leading accusations against Paracelsus was, that he, by teaching medicine in the common speech of the people, profaned its mysteries. At this period messes were administered containing as many as four hundred ingredients; remedies that only the imagination would suggest, things odious, abominable, unmentionable, flesh of vipers, powder of dead men's bones, excrement of men and animals, and other abhorrent things that we cannot easily believe.

practice at Philadelphia. He was active in the disseminating of his views, and under his influence the "Pennsylvania Society of Botanic Physicians" was organized. He was several times its president, and Doctor Thomas Cooke, the founder of the Eclectic Botanic Society of Pennsylvania, and of the Eclectic Medical College of Pennsylvania, was his student.

The foothold which had been thus gained in England was never lost, and the medical conflict was "bequeathed from sire to son," and never abandoned. Early in the Nineteenth Century the "Medico-Botanical Society" was formed in London, of which Earl Stanhope and other noblemen and men of rank were officers and patrons. Members of the Royal Family shared in the partiality for innocuous medication. Queen Victoria, herself, made Sir James Clark, a medical recusant, her chief physician, persistently resisting the endeavors of the others to relegate him to a subordinate place; and Sir John Forbes, likewise a professed disbeliever in the Old Practice, was appointed physician to the Royal Household. The dominant Medical School, however, was too strongly united to prevent any radical reform in dogma or procedures, as later parliamentary legislation has shown; but the more thoughtful and intelligent among all classes of the population are strongly prepossessed in favor of the simpler and safer methods. A policy of prosecutions and persecutions had been adopted, together with the medical boycott, in order to crush the Reform practitioners by penalties and spoliation of goods; but such measures savor too strongly of the old barbarism to be long tolerable in any civilized community.

The late Dr. A. J. Coffin has the credit of having first introduced the American Botanic Practice of Medicine into England. He graduated as a physician in London, and

emigrated to the United States about the year 1830. He made his residence at Troy, in the State of New York, for seven years. During this period he made himself familiar with the doctrines and procedures of Dr. Samuel Thomson, and was on cordial terms with his son, Dr. John Thomson, and with the late Amos Dean and Dr. James Hall, the distinguished naturalist of Albany.

Returning to England he began to promulgate the Botanic Medical Practice, as though it had been discovered and originated by himself. He published several books to sustain his views, assuming for himself the title and distinction of "Founder of Medical Botany in England." His works passed through many editions, some of them as many as twenty, and were translated into other languages for general circulation in Europe. He made use of the Thomsonian medicines, and explained their virtues, but refrained from giving the name of any physician or writer belonging to the Botanic School.* He cited the affirmation of Hippokrates, that the primitive type of all diseases is one and the same; and reiterated the sharp utterance of William Cobbett respecting Dr. Benjamin Rush, that he "by bleeding, cured his patients for there were none left to tell." He likewise affirmed his own conviction that contagion is entirely innocuous. Dr. Coffin was very successful in the disseminating of his views, in the raising of public attention to them and in gaining numerous disciples in all the principal towns.

Dr. John Skelton was another champion of Botanic Practice. He was a man of greater scholarship, energetic, outspoken and resolute. After some years of contention, he

*Dr Coffin denounced the drugs calomel and antimony with a warmth characteristic of the American Botanic practitioners, and enumerated as proper remedies Cayenne pepper, ginger, yarrow, vervain, pennyroyal, Lobelia, "composition powder," agrimony, ground ivy, red raspberry, bog bean, horehound, centaury, barberry, etc.

graduated at the age of forty from the College of Surgeons, retaining at the same time inflexibly his devotion to the new doctrines. He inculcated them by voice and pen, publishing them in book form in a treatise upon "*The Science and Art of Medicine.*" His contributions to medical literature, his superior learning and professional skill, served a valuable purpose in exalting the New School to higher favor and social position. Dr. Coffin, however, regarded him as a rival and competitor; and their contributions led, unfortunately, to the dividing of their adherents into two antagonistic parties.

The American Reformed Practice of Medicine was introduced into England by Dr. Wooster Beach himself in 1848. Dr. Beach paid several visits to that country, journeying to the principal towns and delivering public lectures. His works were extensively sold in the United Kingdom.

At Litchfield, in Staffordshire, he met with an enthusiastic admirer, Thomas Simmons, the son of a Scotch surgeon, a young man of rare courage and ardent zeal. Young Simmons immediately devoted his money to the promulgation of the new doctrines, actually compiling and publishing at his own expense a compend of Dr. Beach's works which should be acceptable to English readers.*

From this time the sale of American Eclectic publications became more extensive, and the works of Dr. Beach, John Buchanan, William Paine, John M. Scudder, John King and

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* *The British and American Reformed Practice of Medicine*, embracing a treatise on the Causes, Symptoms and Treatment of Diseases Generally, on Eclectic Principles, and including a Synopsis of Physiology and Midwifery. Illustrated with Colored Plates. By W. BEACH, M. D., Birmingham, 1859.

Dr. Simmons came to America in 1864, and received the Degree of Doctor of Medicine from the Eclectic Medical College of Pennsylvania. He enlisted in the U. S. Navy, and afterward made his home in Canada, finally removing to Hartford, in Connecticut, in 1876. He was a zealous Radical, and was personally familiar with John Stuart Mill, Harriet Martineau, Eliza Cook, William Cobbett and others in England, and with the late Dr. Edward McGlynn in America. He opposed privilege in politics, and restrictive legislation in Medicine. Dr. Simmons died at Hartford in 1894.

the Physio-Medical authors were supplied to Eclectic and Reform practitioners of every shade of sentiment. The seed bore fruit, and in 1862 the British Medical Reform Association was organized. Its presidents, Doctors Skelton, Trumbull, Hitchman,* Blunt and others were distinguished by their literary and scientific attainments. The meetings were held annually at the principal towns of England.

The endeavor was made, likewise, to diffuse the knowledge of the New School among the people of the United Kingdom by means of tracts, monographs and other publications. The *Eclectic Medical Journal* was begun in 1864 by Dr. F. White, and after its discontinuance *The New Era of Eclecticism* was issued in 1869, Doctor Trumbull and Dr. George Sexton serving in turn as editors. The views of this Association were radical; mineral remedies being generally eschewed, the use of anæsthetics deprecated as destructive to life, and vaccination denounced as not only itself useless to prevent disease, but as being itself a disseminating of morbid conditions.

The endeavor was made in 1873 to establish an Eclectic Medical College in London, including both Homœopathy

* Dr. William Hitchman was a graduate of Erlangen University in Bavaria, the *alma mater* of Samuel Hahnemann. He was a native of North Leach, in Gloucestershire, and received the usual instruction, beginning as an apprentice to a physician, then becoming a student at the Fairfield Asylum for the Insane, a pupil at Guy's Hospital, and licentiate of the Royal College of Surgeons. He then became Eclectic, advocating Homœopathy, Water Cure and Botanic remedies. Finally going to the Continent, and visiting several universities, he graduated in 1851. He was a member of several learned bodies in England, and on the Continent, and also an incessant writer for the Radical press. In his Address in 1873, when president of the British Medical Reform Association, he declared his views as follows:

"The cultured society of an intelligent nation shall yet seek and find the Faculty of Universal Medicine by and through a wise legislature, equal laws, equal rights, equal privileges, equal liberties, and last but not least, equal duties. Great men have been glorious exceptions to the rules of bigotry, custom and prejudice, even in orthodox Physic. Robert Lister, the greatest surgeon of modern times, told me himself that he was an Homœopathist; Sir John Forbes, I can personally testify, was an Eclectic; Sir James Clark, like Herbert Mayo, was an Hydropathist, and Sir Benjamin Brodie advocated Medical Freedom."

Dr. Hitchman died in 1883. He and the author were regular correspondents on ethical and philosophic subjects.

and Hydropathy in its curriculum, as well as Eclectic Medicine. A staff of instructors was appointed, but for want of support the enterprise went no further.

A few years later the Herbalists gained control of the Association. Many of them were holders of purchased degrees.* Dr. Hitchman and others withdrew from further participation. The name of the organization was changed, and it became "The National Assocaition of Medical Herbalists," a name which it has retained.

Later, however, the Eclectic practitioners renewed their endeavors, and formed a new association by the name of "The Eclectic School of Medicine." Mr. John Simmons, of Hyde, the general secretary of the organization, began the publication of a monthly periodical, "*The Eclectic Practitioner.*" The Association sent one of its founders, Dr. Joseph R. Hughes, of Oakham, as its representative to the World's Congress Auxiliary of Eclectic Physicians and Surgeons at Chicago in 1893. He received a fraternal welcome and took an active part in the proceedings.

ECLECTIC MEDICINE IN THE BRITISH POSSESSIONS.

During the earlier years of the Eclectic propaganda there was an Eclectic Medical organization in Canada, and it gave gratifying evidence of a prosperous career. The Dominion had not then been established. There was a Medical Board in the upper province, now Ontario, and a Medical Society respectable both in numbers and influence. The practitioners were chiefly graduates from the colleges in Philadelphia and New York, and several

* Dr. Prince A. Morrow, while a trustee of the Eclectic Medical College in New York, visited England and the Continent. He told the author that a prominent Herbalist proposed a negotiation with him for the degrees of that institution. The same year, 1872, the *British Medical Journal* gave an account of some diploma-selling other than the usual traffic in degrees in absence. A diploma from a New York College, duly attested by the examiners and official seal, was exhibited in the College of Surgeons in London. On careful examination it was found that the names were all forgeries and lithographic fac-similes.

of them were men of superior worth. Matters went on well with them till after the close of the war in the United States. Then, as if by concert, legislation became more stringent and the administration oppressive, finally resulting in the entire suppression of the Eclectic School of Practice in the Dominion.

Attempts have been made to introduce the Reform Practice in several of the British Colonies in the East. Dr. John Broadbent of Melbourne, in Australia, carried on the work for years, encountering hostility, and even persecution. He published a monthly periodical, *The Botanic Practitioner*, to defend and disseminate his views. It was a publication of merit and ability.

In 1868 a medical class of women was established at Nynce Tal, in India, by the Rev. Doctor Humphrey of the American Mission. The Pundit Nanda Kiswara defrayed the expenses for two years. The Government also extended its favor to the enterprise, placing the female ward of the hospital under the supervision of Dr. Humphrey

PROSCRIPTION.

It cannot be truthfully affirmed that American Reform or Eclectic Medicine, or even the British auxiliary movements, find hospitality, fair opportunity, or even common toleration in the British Empire. Numerous have been the bills for medical legislation which have been pressed upon the attention of the Imperial Parliament, having sections in them and clauses proscribing Herbal and Eclectic practitioners. Again and again have delegations from the practitioners who were thus assailed, waited upon the presidents of the Privy Council, from the days of Lord Palmerston till the present time, to secure the rejection of the proposed measures.

The leading publicists and the foremost men of science

have, as with one voice, added their testimony in behalf of Freedom in Medicine. The late Professor Thomas H. Haxley wrote as follows: "A large number of people seem to be of the opinion that the State is bound to take care of the general public and see that it is protected against incompetent persons and quacks. I do not take this view. I think it is much more wholesome for the public to take care of itself in this, as in other matters."

Professor Francis W. Newman, of Oxford, standing at the head of English scholarship, made this declaration, which involves the whole morality of the question: "To enact a Medical Creed or commend a medical process is usurpation — not legitimate legislation."

Mr. Gladstone also expressed himself with equal distinctness: "A man ought to be as free to select his physician as his blacksmith, for he alone is to profit or suffer by his choice. The responsibility is his."

Nevertheless Parliamentary legislation has become more arbitrary and inquisitorial, and the power to harry and prosecute has been granted and exercised, as in the old days of religious bigotry, to the sharp point of persecution. Statutes frequently create offenses, as well as restrain from actual wrong doing, and it is often apparent that only lawyers and privileged individuals derive much advantage from legislation. In England, where there had been no complaint of gross ignorance or malpractice, there have been numerous arrests and imprisonments, for the evident purpose of gratifying spite and rivalry.

The medical authorities appear to excel the political in their intolerance and professional malignity. The Golden Rule, the law of charity, which is often cited as the essential of Christian civilization, seems to have been absolutely

abrogated.* It is not easy for men of limited pecuniary resources to support medical schools while they are thus constantly exposed to legal persecution and spoliation.

All the while the New Remedies, the product of discovery by Eclectic and Reform physicians, and of manufactories of Eclectic medicines, are imported and extensively used in medical practice, while the persons who discovered and first introduced them are superciliously ignored by British publications, and honorable mention of them carefully withheld.†

MEDICAL LEGISLATION IN ENGLAND AND AMERICA.

In 1416 the physicians of London petitioned King Henry V. to this effect: "That no man of no maner, estate, degree, or condicion, practyse in Fisik, from this time forward, bot he have long time yused the Scoles of Fisyk withynne som Universitee, and be graduated in the same; that is to say, bot he be Bacheler or Doctour of Fisyk, having Letters testimonialx suffientz of on of those degrees of the Universite in the whiche he take his degree yn; under payne of long imprisonment and paynge xi. *li.* to the Kynge; and that no Woman use the practyse of Fisyk undre the same payne."

At the time when this petition was made to the King, the learned class of England was entirely, or almost entirely, composed of priests. Lawyers were chiefly robed priests, and medical men were monks or in orders. King Henry himself, had a doubtful title to the throne of England, and he belonged to a branch of the Royal Family of Plan-

* An English practitioner, a Fellow of the Royal College of Surgeons, as well as an alumnus of several universities of the United Kingdom, was once asked by the author for an account of the condition of medical affairs. He declined, making this explanation: "Were I to write a paper on the medical status of England, I should be summoned before the Medical Council and my diploma taken from me, and I should be quite ruined. In matters medical England is much worse than your country."

†While the ninth edition of the *Encyclopædia Britannica* was in preparation a description of the American Eclectic School of Practice was offered to the publishers and refused.

tagenets who had been noted for the favor which they had shown to John Wickliffe and the Lollards. He, like his father before him, sought to obtain the support of the governing classes of England for the usurpation, and accordingly endeavored to propitiate the clergy and universities by declaring himself the champion of religious orthodoxy. He permitted the Parliament to supervise the expenditures of the Government, and introduced the atrocious practice of burning heretics alive.* Such a prince was a man who would be ready to confirm privileges and perogatives to churchmen and religious corporations. He was at war with France and required money, which could be procured in large amounts from churches and monasteries.

The peasantry of England at this period were beggared by the rapacious exactions of the nobility and the devastations incident to the strifes of rival candidates for the Crown, now become a shuttlecock between the Houses of York and Lancaster. They were barely able to subsist in hovels that were not fit to harbor beasts. They could contribute nothing to the exigencies of the King, and were held by him in little account.

The expedient of a permanent National Debt had not been devised, and money for wars was obtained by "benevolences" or contributions from the wealthy and commercial classes. It was no wonder, therefore, that this time and occasion were employed to wrest from Henry this enactment granting a privileged monopoly.

Accordingly, during the reigns of the Kings of the House of Lancaster, the legal physicians were monks and priests, and the authority to license them was exercised by the bishops. When, however, Henry VIII. assumed the Chief

* The penalty of burning alive was statute law in England for years after the American Revolution.

Office in the Church of England, an act of Parliament inhibited the clergy thenceforth from engaging in secular pursuits. The medical art was included in this classification. Lynaker himself, after a brief term as a practitioner and physician to the King, finished his career as a priest. The right to was now vested in the College of Physicians, and the exclusion of other persons from the calling was rigidly maintained.

At this period there were but thirteen legal practitioners of medicine in London, and Surgery was a department of the barber's craft. The men who shaved and cut hair also dressed wounds and extracted teeth.

There does not seem, however, to have been much active persecution of unlicensed practitioners for many years. Many persons usually included among the laity prescribed and ministered to the poor, and women of superior kindness and ability rendered offices of mercy to those within the circle of their activity. But after the introduction of the American Botanic and Eclectic systems, there has been a new departure. More stringent regulations have been enacted, and prosecutions are ever common. The boycott had been already applied to Sir John Forbes, Dickson and other men of originality, but now the humble dispensers of Herbal remedies, experience the harsh rigor of professional proscription.

In several of the American colonies this kind of legislation was adopted; the principal ones being Massachusetts, New Jersey and New York. After the Revolution it was extended to other States. The penalties, however, were not enforced with extraordinary severity till Samuel Thomson began his innovations. At this period heterodox practitioners became numerous, and were in greater favor with the people. Directly the prohibiting statutes were made

more arbitrary and prosecutions were characterized by greater virulence. Oppression engendered dissatisfaction, and the sons of the men who had achieved independence for their country were unwilling to brook the domination of a privileged class, whatever might be the pretensions. The matter was brought to the attention of the "plain people" in different States, with the likelihood of becoming a political issue, and as a result the objectionable statutes were abrogated. "Let us hope forever," said Professor Morrow at Worthington.

Nevertheless, this had hardly been accomplished when a movement was devised for the restoration of the former order of things. The American Medical Association was organized with that avowed end in view. For a quarter of a century little progress, apparently, was made. But the war between the States produced an indifference to matters about which there had before been great sensitiveness. There was a cessation of the jealousy which had existed in regard to encroachment upon civil and personal rights. This was observed by Mr. Herbert Spencer at his last visit to this country, and it was described by him as a losing of the instinct of liberty. In fact, mankind never progress in straight lines of advancement. Like the starry worlds, they move in circles, spiral or vortical, retrograding as well as moving forward. The principles avowed in the Declaration of Independence are hardly recognized. For example, the complaint was made in that instrument of the creation of unnecessary offices and the multiplying of swarms of officers to devour the substance of the people. But now the disposition is predominant in the Halls of Legislation to multiply offices and officers beyond utility or reason. They are manifest in medical matters like a shower of meteors or as the frogs of Egypt in the Book of Exodus.

In 1873 the proposition was advanced that no more medical colleges should be organized except by the approval of the American Medical Association. Bills were introduced in concert in the Legislatures of the States, alike in their language, to restrict the practice of medicine to physicians holding licenses from Examiners appointed from the School of Medicine represented by that body. A medical bureaucracy was evidently the purpose, and medical lobbies beleagured the Legislatures to procure such enactments. There was, however, sufficient resistance to make the proposed measures more modest and moderate than had been contemplated. Accordingly, in many of the States enactments have been accepted with broader conditions, as having the tendency to educate the community to submit at a future time to measures more exclusive and severe.

In the Homœopathic School there is evidence that such a process is taking place. Yet there are significant utterances from representative men, reiterating the declarations of eminent jurists that the enactments are unconstitutional, and likely to be set aside when a judicial decision is made in the Supreme Court of the United States. But the great number find it easier to acquiesce when a matter can be endured than to suffer inconvenience, even in contending for actual rights.

In the Eclectic School a "new departure" is apparent. As the men who suffered persecution and resisted it manfully, pass from the sphere of action, the sentiment seems to have become diffused that such legislation, provided that it is not directed against members of the New School, but only against practitioners who follow methods and procedures that are not embraced in their catagory, is not objectionable.

SYNOPSIS OF MEDICAL STATUTES.

The medical enactments have not been uniform, and the conditions in the different States are often unlike. Few if any of them are yet in the form in which it is contemplated that they shall remain, and they are liable to change at every legislative session.

A synopsis of the medical enactments in the several States and Territories of the Union is here given, with the date when they were made. Some of the changes may have been omitted, but diligence has been employed to assure accuracy.

Alabama, 1891. The Board of Censors of the Medical Association of the State (Old School), and the Boards of Censors of the County Medical Societies which are in affiliation with the State Association, constitute the Boards of Medical Examiners of the State. "No person shall be permitted to practice any irregular system of Medicine* without a certificate of qualification in Anatomy, Physiology, Chemistry and the Mechanism of Labor, from one of the Boards." The penalty for violation is a fine of $25 to $100. No provision is made for the revoking of a certificate, or for appeal from the action of a Board.

Arizona. The Territorial Act, Chapters 617-621, declares that the diplomas of physicians must be regularly issued from medical colleges lawfully organized, and recorded with the Recorder of the county where they are practicing. But diplomas which have been purchased, or revoked by the colleges issuing them, or by act of Legislature, constitute no authority to practice. These conditions do not apply to persons who were commissioned in the medical service of

* By this description the Eclectic and Homœopathic modes of practice are probably meant, but the propriety of using an opprobrious designation in a statute is questionable.

the "Great Rebellion" or to persons living fifteen miles or more from the residence or office of any regular physician.* But any person may practice medicine or surgery gratuitously. The violation of the statute is declared to be a misdemeanor.

Arkansas, 1895. The Courts of each county are authorized to appoint three Medical Examiners, two of whom must be graduates in Medicine. No reference may be had to the School of Practice. There exists no provision for the revoking of a certificate, or for an appeal. The penalty is a fine of $25 to $100, Each day of practice constitutes a separate offense. This statute was enacted by the Legislature after its disapproval by Governor Fishback.

California, 1875 and 1878. This State has three separate Boards of Examiners, which are appointed annually by the three State Medical Societies, and consist of seven members respectively. Their duties are to verify diplomas of graduation, and to issue certificates to persons whose diplomas are found to be genuine and from institutions in good standing. These certificates may be revoked for "unprofessional conduct." The statute defines that "any person shall be regarded as practicing medicine within the meaning of this act, who shall profess publicly to be a physician, and shall habitually prescribe for the sick, or shall append to his name the letters 'M. D.'" The act does not apply to students in medicine under a preceptor, nor to those who render gratuitous service in an emergency. Itinerant venders of drugs, and those who profess to cure disease, injury or deformity by drug, nostrum, manipulation or other expedient, are required to pay a license of $100 a month. The

* The term "regular physician" is evidently used here in its legitimate sense, as denoting a physician as described in the statute, without any invidious reference to a School of Medical Practice.

penalty for violation is a fine of $50 to $100, or imprisonment from thirty to three hundred and sixty-five days.

Colorado, 1881. A State Board of Medical Examiners is authorized, to be appointed by the Governor, and consisting of "six physicians of the regular, two of the Homœopathic and one of the Eclectic School or System of Medicine." Certificates are issued without examination to persons holding diplomas from medical colleges. Graduates of the Electropathic School are included in this provision, and the certificates must be given "without prejudice, partiality or discrimination as to Schools or Systems of Medicine." All other candidates must be examined by the Board. The examination includes Anatomy, Physiology, Chemistry, Pathology, Surgery, Obstetrics and the Practice of Medicine (exclusive of Materia Medica and Therapeutics.) Certificates may be refused to persons convicted of conduct of a "criminal nature," and revoked for the same. The penalty consists of a fine not less than $50 or more than $300, or imprisonment from ten to thirty days for each and every offense. False evidence of any kind in reference to a diploma subjects the offender to the punishment decreed for forgery. The Courts of Record only have power to enforce the provisions of this statute.*

Connecticut, 1893. Three separate Examining Committees, five in number, are nominated by the three medical organizations, the Connecticut Medical Society, the Connecticut Homœopathic Medical Society and the Connecticut Eclectic Medical Association,† and appointed by the State

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*A bill more stringent in its terms, which was said to have been prepared with the concurrence of these three principal Schools of Practice, was introduced into the Legislature in 1899 and passed both Houses. It was, however, returned by Governor Thomas without his approval, accompanied by a forceful message setting forth the objectionable character of its provisions.

† The statute contains the provision that "nothing herein shall be construed to repeal or affect any private charter." This exception was introduced with the intention to

Board of Health. The examinations embrace Anatomy, Physiology, Medical Chemistry, Obstetrics, Hygiene, Surgery, Pathology, Diagnosis, Therapeutics, Practice and Materia Medica. The provisions of the act do not apply to licensed pharmacists, nor to dentists, nor to any person in the employ of the United States while acting in the scope of his employment; nor to any person furnishing medical or surgical assistance in cases of sudden emergency; nor to any person residing out of the State coming to assist or consult with some practitioner in the State; nor to any physician or surgeon then actually non-resident who shall be employed to come into the State to treat, operate or prescribe for any injury, deformity or ailment; nor to any actual resident recommending the use of proprietary remedies sold under trade-marks issued by the United States Government; nor to any chiropodist or clairvoyant who uses no drugs in practice; nor to any person practicing massage, the Swedish movement cure, sun cure, mind cure, magnetic healing, or Christian Science; nor to any other person who does not prescribe medicines of any kind, poisons or nostrums in treatment. No provision is made for revoking of license; and the penalty for violation of the statute is a fine of $100 to $500, or imprisonment from thirty to ninety days, or both fine and imprisonment.

Delaware, 1895. This State has two Boards of Medical Examiners, appointed by the Governor, one composed of five members representing "The President and Fellows of the Medical Society of Delaware," and the other "The

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except the Connecticut Eclectic Medical Association from the requirements of the enactment; as that Society has a special act of incorporation empowering it to license physicians and provide medical instruction for students. Nevertheless, the Board of Censors has been recognized by the State Board of Health as the Examining Committee, and has acted as such; but some of the members of the Association have regarded this as contravening the purpose of the clause exempting the Association from the operation of the enactment.

Homœopathic Medical Society of Delaware State and Peninsula." The Chief Justice of the State and the Presidents of the two Boards, constitute the Medical Council of Delaware. Each Board of Medical Examiners is required to submit to the Council a week prior to its meetings for examination of candidates, questions for thorough examinations in Anatomy, Physiology, Hygiene, Chemistry, Surgery, Obstetrics, Pathology, Diagnosis, Therapeutics, Practice of Medicine and Materia Medica. The Council shall select from the list thus furnished, the questions for the examinations. These are conducted in writing, the candidates selecting the Boards by which they shall be examined. If there are candidates belonging to some other School of Practice, they are examined by the Council and some reputable practitioner of that School from standard text-books. All certificates are issued by the Medical Council. Diplomas from medical colleges confer no right to practice medicine, but are required in order to entitle the applicant to an examination. There is no clause in the statute for revocation of the certificate or for appeal. The penalty is a fine of $100 to $500, or imprisonment for not more than one year. Physicians coming into the State for consultations are exempt from the conditions of this statute.

District of Columbia, 1896. Three Boards of Medical Examiners are authorized by Act of Congress, one to be known as the Board of Medical Examiners of the District of Columbia, to be composed of five physicians, "adherents of the regular School of Practice; one to be known as the Board of Homœopathic Medical Examiners, and one to be known as the Board of Eclectic Medical Examiners. The latter Boards are made up of five physicians each selected from lists proposed by the respective Societies. The appointments are made by the District Commissioners. The

presidents of the three Boards, and two others who are not physicians, but one of them a lawyer, constitute a Board of Medical Supervisors. Applicants for examination must be graduates in Medicine, and must apply to the Board of Supervisors for a license. The Supervisors may refuse or revoke a license, and an appeal may be taken from their decision to the Court of Appeals of the District. Midwives are examined by the Board of Supervisors.

Florida, 1890. The Governor is authorized to appoint a Board of Medical Examiners, graduated physicians three in number, for each Judicial District of the State; also one Board of Homœopathic Medical Examiners, consisting of three graduated Homœopathic physicians, for the State at large. Each Board meets semi-annually at some central point in the district, the Homœopathic Board holding its meetings in the city of Jacksonville. Applicants must produce a diploma from a recognized college, after which it is the duty of the Board to whom they have applied to examine them thoroughly upon Anatomy, Physiology, Surgery, Gynæcology, Therapeutics, Obstetrics and Chemistry, to which Materia Medica is added in the Homœopathic Board. "But," the statute prescribes positively, "no preference shall be given to any School of Medicine." "Females" also, "who follow the practice of Midwifery strictly as such," are exempted from examination. A Board of Eclectic Examiners has since been authorized with powers and requirements similar to those possessed by the Homœopathic Board.

The statute contains no provision for the revoking of a certificate or for appeal.

Georgia, 1894. This State has three separate Boards of Medical Examiners, of five members each, appointed by the Governor, belonging respectively to the Old School, the Eclectic and the Homœopathic Schools of Medicine.

Diplomas from medical colleges confer no right to practice medicine, but each applicant for a certificate must be the graduate of an incorporated medical college, school or university that requires not less than three full courses of study of six months each. If the applicant desires to practice a different system from that recognized in his diploma, he must appear before the Board which represents that system. If, however, he desires to practice a system not represented by any of the Boards, he may choose the Board for himself by which to be examined. Certificates entitling the holder to the right to practice medicine are granted only after passing a satisfactory examination, and no applicant who has been rejected may be licensed by either of the other Boards. There is no provision requiring the examinations of midwives, or for the revoking of a certificate, or for appeal. The penalties are fixed by Section 4,310 of the Code of the State, and a practitioner who has not been licensed has no power to recover compensation for services.

Idaho, 1889. The State Board of Medical Examiners consists of six members, three of the Old School, two Eclectics and one Homœopathist, appointed by the Governor. A diploma from a respectable and reputable medical college or university in good standing, admits the holder to examination. An appeal in case of rejection, or an application for revocation, may be made to the Courts of the State. The grounds for rejection or revocation are unprofessional, dishonorable, immoral or criminal conduct. Applicants who have passed examinations in other State Boards having substantially the same requirements in regard to proficiency, may be licensed without examination. The penalty is a fine of $50 to $100, and imprisonment from ten days to six months.

Illinois, 1899. There have been many changes in the

medical enactments of this State since the General Assembly began the work of legislating to regulate the Practice of Medicine. The last statute upon the subject was enacted in 1899. The State Board of Health is vested with the authority to examine and license candidates for medical practice. It consists of seven members, five from the Old School, one Homœopathist and one Eclectic. No person may begin the practice of medicine, or any department of medicine, or midwifery, except after having procured a license from this Board. Candidates must be graduates from a medical college or institution in good standing, as may be determined by the Board, and undergo an examination which shall be of a character sufficiently strict to test their qualifications. Those who desire to practice any other system or science of treating human ailments, who do not use medicines internally or externally, and who do not practice operative surgery, shall be examined sufficiently to test their qualifications as practitioners. Those who pass examinations successfully shall be licensed accordingly; but only those who are licensed to practice medicine and surgery in all their branches may use any drug or medicine or perform surgical operations, or announce themselves as physicians or doctors. The certificate must be recorded within three months after its date in the office of the clerk of the county in which the holder resides or practices. It is also provided that "Graduates of legally chartered medical colleges in Illinois in good standing, as may be determined by the Board, may be granted certificates without examination."

Certificates may be refused or revoked in the case of individuals who have been convicted of the practice of criminal abortion, or have by false or fraudulent representation obtained or sought to obtain practice in their pro-

fession, or have thus obtained or sought to obtain money or anything of value, or who advertise under names other than their own, or for any other unprofessional or dishonorable conduct. But this shall not be done until the person is permitted to have a hearing before the Board. Itinerant venders of any drug, nostrum, ointment or appliance of any kind for the treatment of diseases or injury, or who advertise treatment, are required to pay a license of $100 a month to be collected by the Board in the name of the People. The penalty for violation of the provisions of this enactment is a fine of $100 for the first offense and $200 for each subsequent offense. Fraud in filing a diploma or certificate, or a forged affidavit of identification, is subject to the punishment imposed for forgery. In case of conviction of any of the offenses mentioned, the Court shall order the person convicted to be committed to the common jail of the county till the fine and costs are paid, and in case of failure to pay them immediately he shall be imprisoned for the first offense not more than thirty days, and for each subsequent offense not more than ninety days.

Indiana, 1895. A Board of Registration and Examination is appointed by the Governor, consisting of physicians in good repute, who are not teachers or professors in any medical college. Each of the four Schools having the largest numerical representation is entitled to have at least one representative on the Board,* but no School of Practice may have a majority of the members. Certificates are issued upon diplomas from medical colleges in good standing, as determined by the Board. When the colleges are below the required standard, a supplemental examination

* These are the Old School, the Eclectic, Homœopathic and Physio-Medical Schools. Dr. William F. Curryer, former President of the National Eclectic Medical Association, is the Eclectic member.

may be made in order to determine the fitness of the candidate. Midwives are likewise required to undergo an examination. The Board has a schedule of requirements for applicants, and for the medical colleges of the State. Certificates may be refused or revoked for inebriety from liquor or drugs. An appeal can be taken from the action of the Board to the Circuit Court of the county in which the applicant or licensed person lives. The penalty for violation of the statute is a fine not less than $25, nor more than $200.

Indian Territory, Cherokee Nation, 1878. The Principal Chief is authorized and required to appoint a Board of Physicians, three in number, residents of the Nation and graduates of some well-authenticated medical school. Their duty is to examine all who desire to live in the Territory and to practice medicine. If the examination is satisfactory, they give the candidate a certificate to that effect. Upon the presentation of this certificate to the United States Indian Agent, he is requested to grant the holder a permit to reside in the Cherokee Nation one year for the purpose only of practicing medicine, and to renew the permit annually during good behavior. The Principal Chief is likewise authorized to grant the holders of such a certificate a permit to remain in the Cherokee Nation, under the same terms and conditions. Any person not a citizen, but claiming to be a physician, and failing to comply with the provisions of the statute, is to be deemed an intruder and dealt with accordingly.

Indian Territory, Choctaw Nation. The Principal Chief is authorized and required to appoint a Board of Physicians, to consist of three persons, citizens of the Choctaw Nation, who are regular graduates of some well-known medical college and residents of the Nation. Their duty is to ex-

amine all persons who are not residents who have come or may come into the territory of the Nation for the purpose of practicing medicine. If the candidate stands a satisfactory examination, or has a diploma which is satisfactory to the Board, they grant him a certificate, upon which the Principal Chief authorizes the Judges of the County Courts to give him a permit to practice medicine. But without this action of the Chief, the Court is prohibited from granting the permit. Any person who is not a citizen who practices medicine in the Nation in violation of the statute is to be held as an intruder and dealt with accordingly.

Iowa, 1886. The State Board of Medical Examiners consists of seven members appointed by the Governor — four of the Old School, two Homœopathists and one Eclectic physician. No member may be in any way connected with a medical college. There are two forms of certificate, and also one of a license issued, namely:

1. A certificate upon a diploma from a medical college in good standing.

2. A certificate upon a successful examination before the Board.

3. A license for itinerant practitioners.

Applicants holding diplomas are licensed after a scrutiny into the genuiness of the instrument. Candidates who are not graduates are examined as to their knowledge of Anatomy, Chemistry, Materia Medica and Therapeutics, Obstetrics, Pathology, Physiology, Practice, Surgery, Bacteriology and Medical Jurisprudence. Itinerant physicians, whether living in the State or not, are required, in addition to either of these certificates, to procure a license annually from the Board, paying for it $250. The fee for a certificate on the diploma is $5; for examination, $10. None are exempt; all who "publicly profess to cure or

heal " must comply with the requirements. All who henceforth begin to practice medicine in Iowa must be examined, and must present evidence of having graduated from a medical college in good standing after having attended four courses of lectures in four separate years. The penalty for violations, is a fine not less than $50 nor more than $100, or imprisonment from ten to thirty days. This act went into effect without the approval of the Governor, who had not been cognizant of it till the time had passed for his consideration.

Kansas, 1879. There is no Board of Medical Examiners in Kansas, nor requirement for the registration of physicians. It is unlawful, however, for any person to engage in the practice of medicine, or in any of its departments within the State, for reward or compensation, who has not attended two full courses of instruction and graduated in some respectable school of medicine, or who can not produce a certificate of qualification from some State or county medical society, and is not of good moral character. The penalty for violation is a fine of not less than $50 nor more than $100, and in addition for each subsequent offense, thirty days of imprisonment, and there can be no compensation recovered for services performed.

Kentucky, 1893. The State Board of Health is directed to issue a certificate to any physician who desires to begin the practice of medicine in the State, who possesses any of these qualifications, namely: 1. A diploma from a reputable medical college legally chartered under the laws of the State. 2. A diploma from a reputable and legally chartered medical college of some other State or country endorsed as such by the State Board of Health. 3. Satisfactory evidence from the person claiming the same that such person was reputably and honorably engaged in the

practice of medicine in Kentucky prior to February 23d, 1864. It is unlawful for any person to practice medicine in any of its branches, unless he has registered in the office of the County Clerk of the county in which he resides, his authority for so practicing medicine, together with his age, address, place of birth, and the School or system of medicine to which he proposes to belong. No itinerant physician, however, is allowed to register. The State Board of Health may refuse to issue a certificate to a person guilty of grossly unprofessional conduct likely to deceive or defraud the public, and may revoke a certificate for a like cause. The applicant in such case may appeal to the Governor, who may affirm or overrule the decision of the Board, and this decision is final. Nothing in the statute may be so construed as to discriminate against any particular School or System of Medicine, or to prohibit women from practicing midwifery, or to prohibit gratuitous services in case of emergency. Surgeons in the service of the United States, and legally qualified physicians from other States called to see a particular case or family, are also exempt from the conditions of the statute. The penalty for violation is a fine of $50; and for each subsequent offense a fine of $100 and imprisonment for thirty days, either or both, in the discretion of the jury; and the person offending is not entitled to compensation for services performed. The opening of an office, or announcing in any other way of a readiness to practice medicine in any county brings the individual within the scope of the enactment.

Louisiana, 1894. This State has two Boards of Medical Examiners appointed by the Governor — one of five physicians recommended by the Louisiana State Medical Society, and one of five physicians recommended by the Hahnemann State Medical Society. They must be graduates in medi-

cine, and three of them are sufficient to conduct an examination. Only holders of a diploma from a medical college in good standing as determined by the Board, are entitled to be examined. They must also possess a good primary education, and be of good moral character. The examinations include Anatomy, Physiology, Chemistry, Principles of Medicine, Obstetrics, Physical Diagnosis, Surgery, Materia Medica and Hygiene. Midwives are required to undergo a special examination. Itinerant venders of drugs, remedies or applications of any kind intended for the treatment of disease or injury, or who by advertising or other method profess to cure or treat disease or deformity, by any drug, nostrum, manipulation or other expedient in the State, are punished by a fine of $20 to $100 for each offense, or by imprisonment from ten to thirty days, or by both fine and imprisonment. The Boards may revoke any permit or certificate issued by them, when the holder has been convicted of immoral conduct before a competent Court. The penalty for practicing medicine without a certificate is a fine of $50 to $100, or imprisonment for ten to ninety days, or both fine and imprisonment. Any practitioner of medicine in any of its departments, failing to comply with the requirements of the statute has no exemption from jury or military duty, and is not permitted to collect compensation for services, nor to testify as an expert, nor to execute any certificate as a physician or surgeon, nor to hold any medical office, nor to be recognized by the State or parish or municipal corporation as a physician or surgeon, nor entitled to enjoy any of the privileges, rights or exemptions granted to physicians and surgeons by the laws of the State. But it is not lawful for the State Boards of Medical Examiners, or for any member of them, to charge or obligate the State except in relation to the publication of registered physicians, etc., but the Boards

must look alone for compensation to the revenue derived from the operation of the medical statute.

Maine, 1895. The enactment of 1895 provides for the appointment by the Governor and Council of a Board of Registration of Medicine, six in number. The members must be graduates of a legally-chartered medical college or university having the power to confer degrees in Medicine, and have been engaged in practice five years; but none of them may belong to the Faculty of any medical college or university. The compensation and expenses of the Board are paid from the Treasury of the State. All physicians in practice on payment of $2 are entitled to registration, and to receive a certificate accordingly, which must be publicly displayed in their office while they are engaged in the practice of medicine. Any person not entitled to registration, may be examined, upon the payment of $10, and if found qualified, will also receive a certificate. The Board has power, after a physician has been convicted of crime in the course of professional business, to revoke his certificate and to cancel his registration. All applicants for registration must be of good moral character and possessed of a reasonable amount of knowledge in the "branches of science" in which he desires to practice. No official attention is given to the possession of a medical degree. The examinations must be, in whole or in part, in writing, and "of an elementary and practical character." They embrace "the general subjects of Anatomy, Physiology, Pathology, Materia Medica, Therapeutics, Surgery, the Principles and Practice of Medicine, Obstetrics, or such branches thereof as the Board may deem necessary for the applicant to possess." The penalty for practicing medicine for gain or hire without being registered, or holding out as physician or surgeon, or using the title of "M. D.," or using the title of

"doctor" or "physician" meaning by it a Doctor of Medicine, is a fine of $100 to $500, or imprisonment for three months, or both fine and imprisonment.

Commissioned officers of the United States, physicians or surgeons called from other States to treat a particular case, persons rendering gratuitous service or assistance in emergency, medical students prescribing or operating under the direction of a registered physician, and midwives who lay no claim to the title of physician or doctor, are exempt from the requirements of the enactment. "Neither shall this act apply to clairvoyants or to persons practicing hypnotism, magnetic healing, mind-cure, massage, Christian science, so called, or any other method of healing, if no poisonous or dangerous drugs are employed nor surgical operations performed; provided, such persons do not violate any of the provisions of Section Nine of this act in relation to the use of 'M. D.' or the title of doctor or physician."

Maryland, 1892, 1894. The act of 1892 provides for two separate Boards of Medical Examiners, of seven members each, one to represent the Medical and Chirurgical Society of the State, and the other the Maryland State Homœopathic Medical Society. They examine all applicants who desire to engage in the practice of Medicine. These must be of good moral character, and possess a competent common school education, as well as the degree of Doctor or Medicine, or a diploma or license conferring the full right to practice all the branches of medicine in some foreign country. But they must have studied medicine three years, and attended three courses of medicine in different years, in some legally incorporated medical college or colleges. If fraud has been used in procuring a license, it may be revoked. The penalty for practicing medicine in violation of the statutes is a fine of $50 to $200 for each offense, or im-

prisonment till the fines and costs are paid, and also to be debarred from recovering compensation for services. The attempt to practice medicine or surgery without having been registered is punishable by a fine of $10 to $200 for each offense. Any person who shall unlawfully procure registration as a physician or surgeon, whether by false statement or the presentation of a spurious license, or a license obtained by false statements, from the Medical Examiners, is liable to a fine of $50 to $500, and forfeits all rights and immunities conferred from such registration.

Massachusetts, 1894. The statute provides for a Board of Registration in Medicine, to be appointed by the Governor, with the advice and consent of the Council. The Board consists of seven persons, residents of the Commonwealth, and graduates of a legally-chartered medical college or university having the power to confer degrees in Medicine, who have been actively employed in the practice of their profession for ten years. No more than three of them may be at the same time members of any one chartered State Medical Society, and none of them may belong to the Faculty of any medical college or university. Their compensation and expenses are paid from the Treasury of the State. They issue certificates to graduates, also to non-graduates after examination, and to physicians who are over sixty years of age and who have been in practice for ten years prior to 1894. Applicants must give satisfactory proof of being twenty-one years of age and of good moral character; and every one who is a graduate and has received a degree of Doctor of Medicine from a college or university having power to confer degrees in the Commonwealth is entitled to be registered at once. Examinations must be, in whole or in part, in writing, and "of an elementary and practical character." They embrace the general

subjects of Surgery, Physiology, Pathology, Obstetrics and Practice of Medicine, and must be suffieiently strict to test the qualifications of the candidate. The penalty is a fine of $100 to $500, or imprisonment for three months, or both. The statute does not apply to commissioned officers of the United States, or to physicians or surgeons called from another State to treat a particular case, or to prohibit gratuitous services; nor to clairvoyants, or to persons practicing hypnotism, Christian science, cosmopathic or any other method of healing; provided, such persons do not violate any of the provisions of Section ten of this act."*

Michigan, 1899. The "Chandler Medical Act" authorizes the Governor to appoint ten resident electors a Board of Registration in Medicine. Not more than five shall be from the School known as Regular, two from the School known as Homœopathic, two from the School known as Eclectic, and one from the School known as Physio-Medical. The selection must be made from lists submitted by the respective legally incorporated state medical societies, which lists must contain at least three times as many names as the Society has representatives on the Board. If a Society fails to make out a list, the Governor must fill the vacancy from members of the School. All must be learned in the profession, graduates, and of six years' practice. All men and women engaged in practice must apply for registration, and have complied with one of the following conditions: 1. That he or she has been already registered with a County Clerk under the law of 1883. 2. That he or she shall present a certificate of registration, or a copy of such certificate which has been issued in some foreign

* This section imposes the penalties as already stated, specifying the offender as "whoever not being registered as aforesaid, shall advertise or hold himself out to the public as a yhysician or surgeon in this Commonwealth, or appends to his name the letters 'M. D.' or uses the title of Doctor, meaning thereby a Doctor of Medicine."

country where the requirements are the same as in Michigan. 3. Or that he or she shall satisfactorily pass an examination in Anatomy, Physiology, Chemistry, Pathology, Therapeutics, Toxicology, Histology, Hygiene, Public Health Laws of Michigan, Practice of Medicine, Surgery, Obstetrics, Gynæcology, Diseases of the Eye and Ear, Bacteriology and Medical Jurisprudence. The examination must be in writing and preceded by a fee of ten dollars. The questions, except in therapeutics and practice of medicine, shall be such as all may answer alike, and there must be an average of seventy-five per cent. of correct answers. 4. A license from another State of this Union where the requirements are similar, and where reciprocal favors are shown, shall be equivalent to a license from the Board. 5. If an applicant helds a diploma from a reputable college having a three years' course of eight months, or a four years' course of six months in each year, in Michigan or any of the United States, he is entitled to registration. But a diploma from a diploma-selling college, or other than a regularly-established and reputable college, may not be registered. The certificate must be duly filed with the County Clerk of the county where the candidate resides. All moneys received must be paid to the State Treasurer, and the expenses of the Board are paid only from the fund so provided. The Secretary only receives a salary. The other members receive only traveling and hotel expenses — and no more than has been actually expended. The penalty for practicing medicine or surgery without having complied with this act is a fine of $100, or imprisonment for ninety days, or both fine and imprisonment. The appending of the letters "M. B." or "M. D." to the name, or prefixing the title "Dr." or any sign or appellation in a medical sense is *prima facie* evidence of practicing medicine within the

meaning of the acts. Exemptions as usual are made for surgeons of the army and navy, and for dentists, temporary assistance, and the domestic administration of family medicines, — also for "any legally-qualified osteopath engaged in the practice of osteopathy" under the permission of the law of 1897 regulating that practice.

Minnesota, 1895. This State has a State Board of Medical Examiners, nine in number, appointed by the Governor. No member of this Board may serve for more than two terms in succession, nor be a member of any college or university having a medical department, and three of the members must be Homœopathic physicians. Applicants for a license to practice medicine and surgery in any of the branches must submit to an examination at a regular meeting of the Board, in Anatomy, Physiology, Chemistry, Histology, Materia Medica, Therapeutics, Preventive Medicine, Practice of Medicine, Surgery, Obstetrics, Diseases of Women and Children, Diseases of the Nervous System, Diseases of the Eye and Ear, Medical Jurisprudence. and such other branches as the Board shall deem advisable. They must also present evidence of having attended three full courses of lectures at a medical college recognized by the State Board of Medical Examiners, of at least twenty-six weeks, no two courses being within the same year. The examinations are required by the Board to be in writing, and in the English language. They last two and a half days, two hours being given to each subject. The Board may refuse or revoke a license "for unprofessional, dishonorable or immoral conduct," in which case the applicant may appeal to the Governor. The penalty for practicing without having first obtained the license is a fine of $5 to $100, or imprisonment for ten to ninety days, or both fine and imprisonment. The practice of medicine is

set forth to include the appending of the letters "M. D." or "M. B." to the name of the individual, or prescribing or recommending for the use of any person "any drugs or medicine, or other agency for the treatment, care or relief of any wound, fracture or bodily injury, infirmity or disease." The act, however, does not apply to dentists.

Mississippi, 1892. Chapter 104 of the Annotated Code requires every person who desires to practice medicine to obtain a license from the State Board of Health. His application must state his name in full, his place of residence and post office address, his nativity and age, the time spent in medical study,, the name and address of the preceptor, the courses of medical lectures attended, the name of the medical schools attended, if a graduate the name of the medical college, the time spent in a hospital, the time if any, spent in the practice of medicine, the School or System of Practice chosen, and references as to personal character. The examination relates to "his learning in the following branches of learning only, viz.: Anatomy. Chemistry, Obstetrics, Materia Medica, Physiology, Pathology, Surgery and Hygiene." All examinations as to learning are upon written questions and answers, "and distinctions shall not be made between applicants because of the different systems or Schools of Practice that may be chosen." The license must be signed by each of the members of the Board who approves of its issuance. It names the place of residence and post office address of the recipient, and qualifications as to learning and moral character. Every person receiving a license must file it within sixty days from its date, in the office of the Clerk of the Circuit Court of the county in which he resides, or otherwise it will be void. Females engaged in the practice of midwifery are not required to procure a license.

Missouri, 1883. The Revised Statutes of Missouri place medical matters in the hands of the State Board of Health. This Board consists of seven members, four of the Old School, two Homœopathists and one Eclectic physician. It gives certificates to graduates of medical colleges in good standing (having a graded course of instruction) signed by at least four members, which are conclusive of the holders' rights to practice medicine in the State. If an applicant is not a graduate, he must submit to such examination as the Board may require. The examinations may be in whole or in part in writing, and must be of an elementary and practical character, but sufficiently strict to test the qualifications of the candidate as a practitioner. If the examination is satisfactory the Board issues a certificate to that effect signed by at least four of the members, which is a license to practice medicine in the State. The Board may refuse certificates to individuals guilty of unprofessional or dishonorable conduct, and revoke them for like causes, after giving the person inculpated an opportunity to be heard in his defense before the Board. Any itinerant vender of any drug, nostrum, ointment or appliance of any kind, intended for the treatment of disease or injury, or who shall in any way "publicly profess to cure or treat diseases, injuries or deformities by any drug, nostrum, manipulation or other expedient," must pay to the State a license of $100 a month, and in case of violation of this condition, is punished by a fine not exceeding $500, or by imprisonment not to exceed six months, or by both fine and imprisonment. Any person practicing medicine or surgery without complying with the provisions of the statute may be punished by a fine of $50 to $500, or imprisonment for thirty days to a year, or by both fine and imprisonment for each and every offense.

There has not always been harmony between the Board of Health and the Courts, Legislature and Governor. Judge Noonan of St. Louis declared certain sections of the statute to be unconstitutional, and the Legislature has once or twice omitted to make appropriation for the Board. The diplomas of a college in Kansas City having been rejected by the Board, an order was secured from the Supreme Court requiring it to accept them. The Osteopathic College also had a controversy, and won its case. In 1896 a graduate of the Physio-Medical College of Indiana was refused, on the ground that the institution was not in good standing. The Supreme Court, however, declared that "good standing" in the statutes simply meant good reputation, and granted him a peremptory writ to obtain the certificate.*

Montana, 1895. A Board of Medical Examiners is appointed by the Governor, with the advice and consent of the Senate. It is composed of "seven learned, skilled and capable physicians" who have attended three courses of lectures, and are "graduates of accredited colleges of medi-

* Dr. Edwin Younkin suggests that the true remedy for these difficulties lies with the medical colleges themselves. "Let their charters be granted upon certain articles of agreement," he proposes; "and let those articles of agreement define the kind of material that the colleges are to accept as students, the amount of preliminary education, the branches to be taught, and the length and number of sessions. Then, when a college violates the stipulations of its charter, the Court can take away the charter and shut the doors of the institution. A charter thus granted, a diploma would be sufficient evidence of qualification."

"As long," Dr. Younkin adds, "as long as an institution is operating under the provisions of its charter, it is a question in my mind whether a State Board of Examiners can have the Constitution and authority to dictate to the graduates of that institution as to whether they practice medicine or not."

Declarations of eminent jurists are of the same tenor. "I hold," says Justice Bradley of the United States Supreme Court, "I hold that the liberty of pursuit — the right to follow any of the ordinary callings of life — is one of the privileges of a citizen of the United States. But if it does not abridge the privileges and immunities of a citizen of the United States to prohibit him from pursuing his chosen calling and giving to others the exclusive right of pursuing it, it certainly does deprive him (to a certain extent) of his liberty; for it takes from him the freedom of adopting and following the pursuit which he prefers; which, as already intimated, is a material part of the liberty of the citizen."

Justice R. W. Peckham quotes a decision of the Supreme Court, that "the word 'liberty' as used in the Fourteenth Amendment to the Federal Constitution, comprehends not merely the right to freedom from physical restraint, but also the right to 'pursue any livelihood or calling; and for that purpose to enter into all contracts which may be proper.'"

cine." The term of office is fixed at seven years. Applicants wishing to practice medicine or surgery, or any of their departments in the State, must present the Board with his or her diploma to be verified as to its genuineness. "If the diploma is found genuine, and is issued by a medical school legally organized and in good standing, whose teachers are graduates of a legally-organized school, which facts the said Board of Examiners shall determine, and if the person presenting and claiming said diploma be the person to whom the same was originally granted, at a time and place designated by said Board, or at a regular meeting of said Board, said applicant shall submit to an examination in the following branches, to wit: Anatomy, Physiology, Chemistry, Histology, Materia Medica, Therapeutics, Preventive Medicine, Practice of Medicine, Surgery, Obstetrics, Diseases of Women and Children, Diseases of the Nervous System, Diseases of the Eye and Ear, Medical Jurisprudence and such other branches as the Board shall deem advisable." He must also present evidence of having attended four courses of lectures of at least six months each. "Said Board shall cause such examination to be both scientific and practical, but of sufficient thoroughness and severity to test the candidate's fitness to practice medicine and surgery; when desired, such examination may be conducted in the presence of the dean of any medical school, or the president of any medical society of the State." A majority of the members of the Board may decide whether the examination is satisfactory, and decide upon the granting of a certificate accordingly.

The Board may refuse to grant a certificate for "unprofessional, dishonorable or immoral conduct." But before this can be done the Board must serve in writing upon the applicant a copy of the charges against him and appoint a

day for the hearing. Upon a like hearing the Board may refuse a certificate to any one who may publicly profess to cure or treat disease, injury or deformity in such a manner as to deceive the public. The Board may also with the concurrence of four members, revoke a certificate for unprofessional, dishonorable or immoral conduct, giving the inculpated physician like opportunity to oppose and refute the charges. In case of such refusal or revocation of a certificate the person aggrieved may take an appeal to the District Court of the County in which the action was taken, and the Court must affirm or reverse the decision of the Board. An appeal may also be taken from the judgment of the District Court to the Supreme Court.

The certificate when awarded must be recorded within sixty days in the office of the County Clerk in the county in which the holder resides, and till it is so recorded the physician practicing under it is liable to all the penalties prescribed. A person practicing medicine or surgery without a certificate is liable on conviction to a fine of $100 to $400, or imprisonment for thirty to ninety days, or to both fine and imprisonment. Any person is regarded as practicing medicine who uses the letters "M. D." or professes to be a physician or surgeon, or "who shall recommend, prescribe or direct for the use of any person any drug, medicine, appliance, apparatus or other agency, whether material or immaterial, for the cure, relief or palliation of any ailment or disease of the mind or body, or for the cure or relief of any wound, fracture or bodily injury, or other deformity, after having received or with the intent of receiving therefor, either directly or indirectly, any bonus, gift or compensation."

Nebraska, 1891. The State Board of Health has charge of medical matters in Nebraska. This Board consists of the

Governor, Attorney-General and Superintendent of Public Instruction. It has four secretaries, graduated physicians who have practiced medicine consecutively for seven years, and are actually so engaged in Nebraska. "Two shall be physicians of the so-called Regular Sohool, one of the so-called Eclectic School, and one of the so-called Homœopathic School." The Secretaries advise and assist the Board in the performing of its duties. Candidates for the practice of medicine must present their diplomas to the Board with an affidavit that they are lawful possessors of the same, and have attended the full course of study required for the degree, and are the persons there named. A medical college, in order to be considered in good standing, must require a preliminary examination for admission to its courses of study, and from the candidate for the degree of Doctor of Medicine an attendance on at least three courses of lectures of six months each, no two of them in the same year, and have a full Faculty of Professors in all the different branches of medical education, namely: Anatomy, Physiology, Chemistry, Toxicology, Pathology, Hygiene, Materia Medica, Therapeutics, Obstetrics, Gynæcology, Principles and Practice of Medicine and Surgery, and clinical instruction in the last two named. If upon investigation of the diploma and affidavit the applicant shall be found entitled to practice, there shall be issued to him the certificate of the Board. The certificate, however, may be refused or revoked for unprofessional or dishonorable conduct, after opportunity for a hearing has been given. No person can recover for professional services who has not complied with the provisions of the statute, and is authorized to be registered as a physician. Any person not possessing the qualifications for the practice of medicine, surgery or obstetrics as required, or who has engaged in such practice in disregard of the

provisions of the statute, is liable to a fine of $50 to $300 and costs for each offense, and stand committed till the fines and costs are paid. Itinerant venders of any drug, nostrum, ointment or appliance of any kind intended for the treatment of any disease or injury, or who shall by any method publicly profess to cure or treat a disease or injury or deformity, by any drug, nostrum, manipulation or other expedient, will be deemed guilty of a misdemeanor, and upon conviction will be fined $50 to $100 and imprisoned for thirty days to three months, or both, in the discretion of the Court, for each offense. Any person is to be regarded as coming within the scope of this enactment "who shall operate on, profess to heal, or prescribe for, or otherwise treat any physical or mental ailment of another." But the enactment does not apply to commissioned surgeons of the United States service, nor to nurses in their legitimate occupations, or to gratuitous services in case of an emergency, nor to the administration of household remedies.

Nevada, 1875. No person may practice medicine or surgery in Nevada who has not received a medical education and a diploma from a regularly-chartered medical school which had a *bona fide* existence at the time when the diploma was granted. A copy of it must be filed with the Clerk of the County, or a certificate from the dean of the school, certifying to his graduation. The penalty for practicing medicine in violation of the statute, is a fine of $50 to $500, or imprisonment for thirty days to six months for each offense, or both fine and imprisonment.

Several States have required from physicians who are not graduates in medicine, a certain defined number of years of practice, next preceding the passage of the medical act. The Supreme Court of Nevada has declared this to be unconstitutional, because in violation of the Fourteenth

Amendment to the Federal Constitution. It is not difficult to perceive that the amendment in question, properly interpreted and applied, is more sweeping still.

New Hampshire, 1897. The statute provides for three separate Boards of Medical Examiners, of five members each, to be appointed by the Governor, from each of the three State Medical Societies. The Superintendent of Public Instruction is their Regent, and all examinations of candidates are conducted through him. Only persons holding diplomas from reputable medical colleges are admitted to examination. Licentiates from other States, with a standard equal to that of New Hampshire, are licensed without examination. A discrimination is made in favor of applicants who graduate at the medical colleges of New Hampshire prior to 1903.

A medical statute had been enacted several years before, but was declared unconstitutional by the Supreme Court of the State.

New Jersey, 1894. The enactment of 1894 provides for a State Board of Medical Examiners appointed by the Governor, with the advice and consent of the Senate, to "consist of five Old-School physicians, three Homœopathic and one Eclectic." All persons beginning the practice of medicine in any of its branches in the State must submit an application to the Board, with satisfactory proof of good moral character, and a competent common-school education, and must also have received a diploma conferring the degree of Doctor of Medicine from some legally-incorporated medical college in good standing when it was issued, or a diploma or license conferring full right to practice medicine in a foreign country, having studied medicine four years, including three full courses of lectures in different years in some American or foreign medical college or colleges legally in-

corporated prior to the granting of the diploma or license. They must then submit to examinations in writing in the English language; and the questions, except in Materia Medica and Therapeutics, must be such as can be answered in common in all Schools of Practice. If an applicant intends to practice as an Homœopathist or Eclectic the members of the Board belonging to these Schools respectively will examine him in Materia Medica and Therapeutics. The examinations are upon the following subjects, namely: Materia Medica and Therapeutics; Obstetrics and Gynæcology; Practice of Medicine, including Diseases of the Skin, Nose and Throat; Surgery, including Surgical Anatomy and Diseases of the Eye, Ear and Genito-Urinary Organs; Anatomy, Physiology, Chemistry, Histology, Pathology, Bacteriology, Hygiene, Medical Jurisprudence, and in such other subjects as the Board may decide. All examinations must be scientific and practical, and of sufficient severity to test the fitness of the candidate. If they are satisfactory the Board issues a license entitling the recipient to practice medicine in the State. In case that an adverse conclusion is reached, the candidate may appeal to the Governor, who will appoint three competent persons, one of each School, to review the questions and answers submitted. A temporary license is also given to a physician from another State who takes the place of a physician in New Jersey. Licentiates from New York and Pennsylvania, and members and ex-members of the State Examining Boards of other States are accepted without examination. A license may be refused or revoked for chronic inebriety, the practice of criminal abortion, conviction of crime which involves moral turpitude, public advertising of special ability to treat or cure chronic and incurable cases, or fraud in procuring the license.

Any person is regarded as practicing medicine or surgery, who makes use of the words or letters "Dr.", "Doctor," "Professor," "M. D.", "M. B.", in connection with his or her name intending to be understood by it as a practitioner of Medicine or Surgery in any of its branches, and who in connection with any of these titles or without them "shall prescribe, direct, recommend, advise, apply, give or sell, for the use of any person or persons, any drug or medicine or other agency or application for the treatment, cure or relief of any bodily injury, infirmity or disease." The provisions of the act "apply to all persons professing and attempting to cure diseases by means of the so-called systems of 'faith-curism,' 'mind-reading,' 'laying-on-of-hands,' and other similar systems." The penalty for violation is a fine of not less than $100 or imprisonment for not less than thirty days, or both fine and imprisonment; and double the penalty for each subsequent offense.

The Examiners are paid solely from the license fees which they receive.

New York, 1893, 1895. There are three separate State Boards of Medical Examiners in New York, of seven members each, one representing the Medical Society of the State, one representing the Homœopathic Medical Society, and one representing the Eclectic Medical Society. They are appointed by the Board of Regents of the University of the State of New York from lists of candidates furnished by the respective Societies. Each of these candidates must have received the degree of Doctor of Medicine from some registered medical school, and practiced medicine legally in the State for five years. Each Board must submit to the Regents as required, lists of suitable questions in Anatomy, Physiology and Hygiene, Chemistry, Surgery, Obstetrics, Pathology and Diagnosis, and Therapeutics, including

Practice and Materia Medica. From these lists the Regents prepare question papers for all these subjects, which are the same for all candidates at any examination, except that in Therapeutics and Materia Medica all the questions submitted to any candidate are those from the Board selected by him, and must be in harmony with the tenets of that School as determined by its State Board of Medical Examiners.

Candidates are admitted to examination by the Regents upon paying a fee of $25 and presenting satisfactory evidence, (1) that they are more than twenty-one years of age, (2) that they are of good moral character, (3) that they have the general education required by law preliminary to receiving the degree of Bachelor or Doctor of Medicine in the State, (4) that they have studied medicine not less than three full years, including three satisfactory courses in three different academic years in a medical school registered as maintaining at the time a satisfactory standard, and (5) that they have either received the degree of Bachelor or Doctor of Medicine from some registered medical school, or a diploma or license conferring full right to practice medicine in some foreign country.

The degree of Bachelor or Doctor of Medicine can not be conferred in New York before the candidate has filed with the institution conferring it the certificate of the Regents of the University, that three years before the date of the degree he has either graduated from a registered college or satisfactorily completed a full course in a registered academy or high school; or that he has had a preliminary education considered and accepted by the Regents as fully equivalent. The Regents may, however, in their discretion accept five years of reputable practice of medicine as equivalent for any part of the requirements in regard to

general education and attendance at a medical school for three years.

Upon receiving from a State Board an official report that an applicant has successfully passed the examinations and is recommended for license, the Regents, if they deem him qualified, issue a license accordingly to practice medicine. Applicants who have been examined and licensed by other State Examining Boards which have been registered by the Regents as maintaining standards not lower than provided in this State, and applicants matriculating in a medical school in New York before June 5th, 1890 and graduating before August 1895, may receive from them an endorsement of their licenses or diplomas conferring all rights of a license from the Regents issued after examination.

Every license to practice medicine must be registered in the office of the County Clerk of the county in which the holder intends to begin practice, before he so engages. He must make affidavit that he is the person to whom it was issued, that he had complied with all requisites of study, attendance and examinations, that he had paid no money for the license except the regular fees, and that no fraud, misrepresentation or material mistake had been employed or occurred in order that the license should be conferred. In case of removal to another county the certificate of registration must be shown to the County Clerk, and endorsed by him.

No registration is valid unless the authority registered to practice medicine has been issued or endorsed as a license by the Regents. "No diploma or license conferred on a person not actually in attendance at the lectures, instruction and examination of the school conferring the same, or not possessed at the time of its conferment, of the requirements then demanded of medical students in this State as a con-

dition of their being licensed so as to practice, and no registration not in accordance with this article shall be lawful authority to practice medicine, nor shall the degree of Doctor of Medicine be conferred *honoris causa* or *ad eundem*, nor if previously conferred shall it be a qualification for such practice." All previous legislation making degrees of these descriptions heretofore conferred a condition of license are repealed.

The penalty for violation of the medical statute is a fine not exceeding $250 for the first offense, or imprisonment for six months, and for subsequent offenses a fine of not more than $500 or imprisonment for one year, or both fine and imprisonment. The offending is enumerated as practicing medicine without lawful registration; buying, selling or fradulently obtaining any medical diploma, license, record or registration, or aiding or abetting in such a matter, or practicing medicine under cover of such an illicit procedure, or after having been convicted of a felony, or appending the letters "M. D." to his or her name, or any title conveying the impression of being a practitioner of medicine when not having legally received the medical degree or license to practice medicine. Any person who shall practice medicine under a false or assumed name, or who shall falsely personate another practitioner of a like or different name is declared guilty of a felony.

North Carolina, 1889. There is established for the proper regulation of the practice of medicine a Board entitled "The Board of Medical Examiners of the State of North Carolina," consisting of seven regularly graduated physicians appointed by the Medical Society of the State. No person may engage in the practice of medicine except he has been licensed by this Board. All applicants must be examined by the Board on Anatomy, Physiology, Surgery,

Pathology, Medical Hygiene, Chemistry, Pharmacy, Materia Medica, Therapeutics, Obstetrics and the Practice of Medicine. If found competent the applicant will reecive a license or diploma conferring the desired authority. Five members of the Board constitute a quorum, and four must be agreed in regard to the qualifications of the applicant. Two of the Examiners can grant a temporary license which will be valid till the next meeting of the Board. Any license granted by the Board may be rescinded, when the holder has been guilty of grossly immoral conduct. Any person who practices medicine without a license can not sue for and recover any bill for services; and upon conviction for so doing, may be fined $25 to $100 or imprisonment, at the discretion of the Court, for each and every offense. Midwives are not included in this statute, and physicians from other States coming into the State for consultation are likewise exempt.

North Dakota, 1891. The State Board of Medical Examiners is appointed by the Governor, and is composed of nine persons, eight of them practicing physicians in good standing, and one a lawyer. Two of the physicians are to be Homœopathists. No member may serve more than two terms in succession, or be member of any college or university having a medical department. All persons commencing the practice of Medicine, Surgery and Obstetrics in any of their branches in the State, must apply for a license and submit to an examination in Anatomy, Physiology, Chemistry, Histology, Materia Medica, Therapeutics. Preventive Medicine, Practice of Medicine, Surgery, Obstetrics, Diseases of Women and Children, Diseases of the Nervous System, Diseases of the Eye and Ear, Medical Jurisprudence, and such other branches as the Board shall deem desirable, and present evidence of having attended

three courses of lectures of six months each; the examination to be both practical and scientific, but of sufficient severity to test the candidate's fitness to practice Medicine, Surgery and Obstetrics. When desired, it may be conducted in the presence of the Dean of any medical school or the president of medical society of the State. After examination the Board may grant a license to practice, but only by consent of seven members, and the person receiving it must file it, or a copy of it, with the Register of Deeds where he or she may reside. A license may be revoked or refused for unprofessional, dishonorable or immoral conduct, or for chronic or persistent inebriety, or for the practice of criminal abortion, or for publicly advertising to treat or cure diseases which, in the opinion of the Board, it impossible to cure. The person inculpated is entitled to a hearing in person, or by attorney, in his own behalf, and to an appeal to the appointing power. The penalty for practicing medicine without a license is a fine of $50 to $200, or imprisonment for ten to sixty days, or both fine and imprisonment. Any person is regarded as practicing medicine who appends the letters "M. D." or "M. B." to his or her name, or for a fee prescribes, directs or recommends for the use of any person any drug or medicine, or other agency for the treatment, cure or relief of any wound, fracture or bodily injury, infirmity or disease. But this enactment does not apply to dentists, or to surgeons commissioned in the service of the United States, or to physicians or surgeons in consultation from other States or Territories, or to medical students practicing medicine under the supervision of a preceptor.

Ohio, 1896. The Governor of Ohio is authorized to appoint, with the advice and consent of the Senate, a State Board of Medical Registration and Examination consisting of seven members, who are physicians of good standing in

their profession. Representation is given to Schools of Practice in the State in proportion to their numerical strength, but no one School is to have a majority in the Board. No person may practice medicine, surgery or midwifery except he shall first have complied with the requirements of the statute. If a graduate, he must present his diploma either personally or by letter or proxy, with an affidavit that he is the person named, and is the lawful possessor, and stating his age and time spent in the study of medicine. If the Board finds the diploma to be genuine, and from a legally-chartered medical institution in good standing, as determined by the Board, and that the person named in it is the holder and possessor, it shall issue its certificate to that effect, which, when delivered to the Probate Judge for record is conclusive evidence that the owner is entitled to practice medicine or surgery in the State.

The Board may refuse or revoke a certificate in case that the person is guilty of felony or gross immorality, or addicted to the liquor or drug habit to such a degree as to render him unfit to practice medicine or surgery. An appeal may be taken to the Governor and Attorney-General, and their decision, either affirming or overruling this action, is final.

All persons desiring to enter upon the practice of midwifery must also appear before the Board for examination. If this is satisfactory a certificate to that effect is issued, which entitles the holder, when filed with the Probate Judge, to practice midwifery in the State. It may be refused or revoked as in the case of physicians. The certificate, however gives no authority to perform version, or treat breech or face presentation, or do any obstetric operation requiring instruments, except in emergencies.

The penalty for practicing medicine or surgery in violation of the statute is a fine of $20 to $500, or imprisonment

from thirty days to one year, or both fine and imprisonment. A person practicing midwifery in violation of the statute is liable to a fine of $25 to $100. A person who files or attempts to file as his own, the diploma or certificate belonging to another, or a false, forged certificate of his identity, or who wilfully swears falsely to any question propounded at his examination, or to any affidavit required to be made or filed by him with the Board, is guilty of felony and liable to imprisonment in the penitentiary for one to five years.

A person is regarded as practicing medicine or surgery who appends the letters M. D. or M. B. to his name, or for a fee prescribes, directs or recommends for the use of any person, any drug or medicine or other agency for the treatment, cure or relief of any wound, fracture or bodily injury, infirmity or disease; but this does not prohibit service in the case of emergency, or the domestic administration of family remedies. None of these requirements or penalties apply to commissioned officers in the service of the United States, nor to legally qualified dentists when engaged exclusively in dentistry, nor to legal practitioners of medicine or surgery from another State or Territory when in actual consultation with a legal practitioner of Ohio, nor to a legal practitioner living within the border of a neighboring State whose practice extends over the boundary.

Oklahoma. No person is permitted to practice medicine in any of its departments in Oklahoma unless he is a graduate of a medical college, or unless, upon examination before a Board composed of the County Superintendent of Public Health and two other physicians selected by the Territorial Board of Health, he is found proficient in the practice of Medicine and Surgery, and to have been actually engaged in practice of medicine for a term of five years.

No person may practice medicine unless he is of good moral character, and not an habitual drunkard. Any person possessing the qualifications required, will, upon the presentation of it, or proof by affidavit that it is lost or destroyed, and upon the affidavit of two reputable citizens from the county in which he resides that he possesses the qualifications of a physician as here set forth, receive from the Superintendent of Public Health a license certifying him to be a practicing physician and having the requisite qualifications. This license must be recorded in the office of Register of Deeds of the county. Any person who practices medicine, or attempts to do so, without complying with the provisions of the statute is to be deemed guilty of a misdemeanor. Any person who professes publicly to be a physician, or appends the title of "M. D." to his name, comes within the requisitions. But the statute does not prohibit students from prescribing under the supervision of preceptors, or gratuitous services in case of emergency, nor apply to commissioned surgeons in the Army and Navy of the United States.

Oregon, 1895. The Board of Medical Examiners for the State of Oregon consists of five physicians appointed by the Governor. They must have been residents of the State for seven years and of five years of practical experience in their profession. "Three of the Board shall be regulars, one Eclectic and one Homœopathist." Every person desiring to practice Medicine or Surgery, or either of them, in any of their or its branches, must make a written application to the Board for a license. He must accompany it by an affidavit setting forth the actual time spent in the study of Medicine and Surgery, and when; whether such study was in an institution of learning, and if so, give its name and location; and if not, then where and under whose tutorship

the study was prosecuted; the time that the applicant has been engaged in actual practice, if at all, of medicine and surgery, or either of them, and where he was located; and his age at the time of making application. He must then, at the time and place designated by the Board, or at a regular meeting, undergo an examination in Anatomy, Physiology, Chemistry, Materia Medica, Therapeutics, Practice of Medicine, Surgery, Obstetrics, Diseases of Women, Medical Jurisprudence, and such other branches as the Board shall deem advisable. The examination is to be both scientific and practical, and of sufficient severity to test the fitness of the candidate for the profession. It must be by questions and answers, written or printed, or partly written. After examination, if the result is satisfactory, the Board grants a license to practice in the State. The Board, however, may refuse or revoke a license for "unprofessionable or dishonorable conduct," by which is signified: 1. the procuring, or aiding or abetting in procuring, a criminal abortion; 2. the employing of "cappers" or "steerers"; 3. the obtaining of a fee on the assurance that a manifestly incurable disease can be permanently cured; 4. the wilful betraying of a professional secret; 5. the advertising of medical business in which untruthful or improbable statements are made; 6. all advertising of any medicines whereby the monthly periods of women are regulated or menses re-established if suppressed; 7. conviction of any offense involving moral turpitude; 8. habitual intemperance.

Before a license can be revoked a complaint must be filed with the Secretary of the Board, and a notice served upon the person inculpated, in order that he may appear and defend himself. In case of refusal or revocation of a license, there may be an appeal to the Circuit Court of the county in which the Board sat when the action was taken,

and a second appeal to the Supreme Court. The person receiving the license must file it, or a copy, with the County Clerk of the county in which he resides, and in case of removal to another county a certified copy must be filed with the County Clerk there, as in the former instance.

Any person practicing medicine or surgery without a license, or contrary to the statute, is subject on conviction, to a fine of $50 to $100, or to imprisonment for ten to ninety days, or by both such fine and imprisonment. Any person will be regarded as practicing medicine who appends the letters "M. D." or "M. B." to his or her name, or who shall for a fee, prescribe, direct or recommend any drug or medicine or agency for the treatment, cure or relief of any wound, fracture or bodily injury, infirmity or disease. Justices of the peace and municipal courts have jurisdiction of the provisions of the enactment. Dentists are not included in the prohibition.

Pennsylvania, 1893. The Statute creates the Medical Council of Pennsylvania consisting of the Lieutenant-Governor, the Attorney-General, the Secretary of Internal Affairs, the Superintendent of Public Instruction and the president of the State Board of Health and Vital Statistics, including with them the Presidents of the three State Boards of Medical Examiners, for which the enactment specially provides. This Medical Council holds two stated meetings at Harrisburg in each year, and may hold special meetings at such times and places as it may deem proper. It supervises the examinations conducted by the Medical Examiners of all applicants for license to practice Medicine in the Commonwealth, and issues licenses to applicants presenting satisfactory and properly certified copies of licenses from State Boards of Medical Examiners or State Boards of Health of other States, or who have successfully passed

examinations made by the State Boards of Examiners of Pennsylvania. This Medical Council, however, has no powers, duties or functions, except such as pertain to the supervision of examinations and the issuing of licenses to applicants.

There are three separate Boards of Medical Examiners for the State, of seven members each; one representing the Medical Society of the State of Pennsylvania, one representing the Homœopathic Medical Society of the State and and one representing the Eclectic Medical Society. The members of the Boards are appointed by the Governor from names furnished by the respective societies, and in case of neglect to furnish such lists, then from members in good standing, belonging to the society entitled to nominate. Each person appointed must be a registered physician in good standing who has practiced medicine or surgery for a period of not less than ten years. Each Board has power to take testimony concerning matters within its jurisdiction, and the presiding officer may issue subpœnas and administer oaths to witnesses.

The several Boards are required, not less than a week prior to each examination of candidates, to submit to the Medical Council questions for thorough examinations in Anatomy, Physiology, Hygiene, Chemistry, Surgery, Obstetrics, Pathology, Diagnosis, Therapeutics, Practice of Medicine and Materia Medica. The Council selects from the questions so submitted the questions for each examination. These are the same for all candidates, except that in the departments of Therapeutics, Practice of Medicine and Materia Medica the questions must be in harmony with the teachings of the School selected by the candidate. The examinations are in writing, and when concluded the Board is required to act upon them without unnecessary delay.

An official report signed by the officers and each acting member is transmitted to the Medical Council, in which are given the examination, average of each candidate in each branch, the general average, and the result, with the Examination papers, the questions and answers, to be kept for information and reference. The Medical Council is required to issue to each candidate who has successfully passed the examination and is adjudged by the Council to be duly qualified for the Practice of Medicine, a license to practice medicine and surgery in the State. The Medical Council must require the same standard of qualifications from all candidates, except in the departments in which each Board specifically determines the standard for its own applicants.

Every applicant is required to present a written application for license to the Medical Council, with satisfactory proof that he is of good moral character, and more than twenty-one years of age, that he has obtained a competent common-school education and has received a diploma from a legally-incorporated medical college, or a diploma or license conferring the full right to practice medicine and surgery in some foreign country, having pursued the study of medicine for at least four years, including three regular courses of lectures in a legally-incorporated medical college prior to the granting of the diploma or foreign license. Upon receiving the application the Council, if satisfied with it, issue an order for an examination before the Board of Medical Examiners which the candidate may select. In case of failure to pass the examination the candidate may have a second examination after six months and within two years, without paying an additional fee. Applicants who have been licensed by the State Boards of Medical Examiners or State Boards of Health of other States, on payment of a fee of $15 and filing a copy of the license certified by

the affidavit of the president or secretary of the Board by which it was granted, showing that the standard of the Board is the same substantially as the one required in Pennsylvania, receive a license conferring the rights and privileges provided by the fourteenth and fifteenth sections of the medical statute.

No person may enter upon the practice of medicine or surgery in the State unless he or she has complied with the provisions of the medical statute and has exhibited to the prothonotary of the Court of Common Pleas of the county in which he or she intends to engage in practice a license duly obtained, and is duly registered. The penalty is a fine not exceeding $500.

The statute exempts from its conditions medical officers of the United States, medical examiners of relief departments of railroad companies while so employed, members of the resident medical staff of any legally-incorporated hospital, dentists, legally-qualified physicians from other States or countries coming to meet registered physicians in consultation, physicians or surgeons residing on the border of another State whose practice extends into Pennsylvania, but who do not open an office or have a place in the State to receive calls, and practitioners duly registered before March, 1894. Nor does the statute interfere with or prevent the dispensing and sales of medicines or medical appliances by apothecaries and pharmacists, or with the manufacture of artificial eyes, limbs or orthopedic instruments or trusses of any kind for fitting such instruments on persons needing them.

Rhode Island, 1895. The State Board of Health issues upon application a certificate to any reputable physician who is practicing, or who desires to begin the the practice of Medicine or Surgery in the State, who possesses a diploma

from a reputable and legally-chartered medical college endorsed as such by the Board, or who gives satisfactory evidence of having been reputably and honorably engaged in the practice of medicine or surgery before 1892. Applicants desiring to engage in practice must present themselves before the State Board of Health and submit to such examination as the Board may require. If the examination is satisfactory a certificate is issued accordingly. The statute permits no discrimination against any particular School or System of Medicine, and neither prohibits women from practicing midwifery nor the rendering of gratuitous services in case of emergency. Nor does it apply to surgeons in the service of the United States, or to legally-qualified physicians from another State who are called to see a particular case, but do not open an office or appoint a place to receive calls. Any medical or surgical service performed or attempted for reward or compensation in violation of the statute, is punishable for the first offense, by a fine of $50, and for each and for every subsequent conviction by a fine of $100, or imprisonment for thirty days, or by both, in the discretion of the Court; and the offender is not entitled to receive compensation for services so rendered. The opening of an office, or announcing of readiness to practice medicine or surgery in the State, is declared to be to engage in the practice of medicine within the meaning of the enactment.

South Carolina, 1894. A State Board of Medical Examiners, seven in number, one from each Congressional District of the State, is appointed by the Governor. The Board examines all applicants who hold diplomas from any medical colleges or schools, and give to each one successfully passing the examination a certificate to that effect. A record is kept of the proceedings, and a register of all applicants for a license, together with the age of each, the time spent in the

study of medicine, and the name and locations of the institutions granting the degrees or certificates of lectures in medicine or surgery. The certificate of qualification entitles the holder to be registered as a lawful practicing physician by the Clerk of the Court of the county in which he or she may reside. Upon the refusal of any license, the applicant may appeal to the Governor, who may order a re-examination to be held in the presence of the Dean of any medical college in the State and a committee composed of six practicing physicians. Medical officers in the service of the United States, and physicians or surgeons from other States called in consultation are not included in the conditions of the statute. Midwives also are not subject. Persons practicing medicine in the State without complying with these conditions, or in violation of them, are punished upon conviction by a fine not exceeding $300, or by imprisonment for not more than three months, or both fine and imprisonment at the discretion of the Court. The compensation of the Board of Medical Examiners is derived solely from receipts from applicants.

South Dakota, 1893. The Board of Health is constituted a Board of Public Examiners *ex officio*, for the purpose of examining and licensing physicians to practice medicine in the State. Any person who is a graduate of a lawful medical college and has attended three full courses of medical lectures of six months each, no two of them in the same year, who is of good moral character and not an habitual drunkard, upon the proof of such facts to the Superintendent of the State Board of Health as the Board shall require, and upon the payment of a license-fee of $5, receives from the Superintendent a license certifying that he is a practicing physician and qualified. The license must be recorded in the office of the Register of Deeds in the

county where the physician resides. The State Board of Health may cancel any such license, if it was fraudulently obtained, or if the physician is an habitual drunkard, or is guilty of immoral practices or gross unprofessional conduct. But the person implicated must first have a hearing before the Board, at which a majority must be present, after at least ten days' notice. and there must be due proof of the matter charged. An appeal may be taken to the Circuit Court of the county in which he lives by any person aggrieved by the action. It is unlawful for any physician or other person to practice medicine, surgery or obstetrics in any of their departments, except he holds a license from the State Board of Health; except such as have been so engaged before the passing of the enactment, students prescribing under the supervision of preceptors, persons rendering gratuitous services in case of emergency, and surgeons commissioned in the army or navy of the United States. The penalty for violation of the statute, or for practicing medicine without a license is a fine of $25 to $100, or imprisonment for a term not exceeding thirty days, or both fine and imprisonment in the discretion of the Court.

Tennessee, 1889. The State Board of Medical Examiners consists of six graduate physicians, two from each section of the State. "The three Schools of Medicine, viz: Allopath, Homœopath and Eclectic shall be represented on said Board of Examiners." Any person wishing to enter upon the practice of medicine in any of its branches, except dentistry, must present to the Board of Medical Examiners a diploma from some medical college in good standing. "The Board shall recognize any college that is recognized by the National Medical Association." He must otherwise present himself before the Board for examination upon Anatomy, Physiology, Chemistry, Pathology, Surgery, Obstetrics and

Therapeutics. If the diploma is found genuine, or if the applicant is found worthy and competent, then the Board issues a certificate in accordance with the facts, signed by all the members, which is conclusive as to the right of the holder to practice medicine in the State. During the recess of the Board two of its members may grant temporary licenses, which continue in force till the next regular meeting of the Board. But no such license may be granted where an applicant has been rejected by the Board till six months have intervened.

Five members of the Board constitute a quorum, and a majority of those in attendance is necessary for the rejecting of any application. The rejection does not bar the applicant against another examination three months afterwards. The statute further provides "that the members of the Board representing each School of Medicine shall have the right to examine all applicants of that School, and the Board shall issue the certificate of qualification to applicants who are recommended by the members who belong to said School after such examination."

Every person holding a certificate must present it to be recorded in the office of the Clerk of the Court of the county in which he resides, and the date of record endorsed upon it. Till this is done he may not exercise any of the rights or privileges conferred to practice medicine. In case of removing to another county the certificate must be again recorded there as before, but practitioners in one county who go into another on professional service are not required to register there. The penalty for practicing medicine in violation of the statute is the sum of $25 for the first offense and $200 for each subsequent offense. But women who follow the avocation of midwife are exempt. A person filing or attempting to file as his own the diploma or certi-

ficate of another, or a forged affidavit of identification, will be guilty of felony. Itinerant venders of any drug, nostrum, ointment or application of any kind, intended for the treatment of disease or injury, or who may in any way profess to cure or treat diseases or deformity by any drug, nostrum, manipulation or other expedient, in the State, incurs the penalty of a fine of $100 to $500.

The Board of Medical Examiners derive their compensation solely from fees, and can not obligate the State for the payment of any money.

Texas, 1879. A Board of Medical Examiners is appointed in every Judicial District of the State by the Presiding Judge, composed of no less than three practicing physicians, who are residents of the District and graduates of some medical college recognized by the American Medical Association. They are required to examine thoroughly all applicants for certificates of qualification to practice medicine in any of its departments, whether they are furnished with medical diplomas or not, upon Anatomy, Physiology, Pathological Anatomy and Pathology, Surgery, Obstetrics and Chemistry; "but no preference shall be given to any School of Medicine."* When the Board shall be satisfied as to the qualifications of an applicant they grant him a certificate of qualification. This entitles the holder to practice in any county of the State, when it has been recorded in the office of the Clerk of the District Court of the County in which the practitioner may reside or sojourn. Other persons who practice medicine, except those who had been duly authorized before 1875, will be punished as provided in the penal code. But women practicing midwifery strictly as such are not liable to the penalty.

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*The Constitution of Texas specifically inhibits all legislation unfavorable to any School of Medicine.

Utah, 1894. The Governor of Utah appoints biennially a Board of Medical Examiners, seven in number, "from the various recognized Schools of Medicine." They hold office two years and till their successors are appointed. In order to be eligible they must be graduates of legally-chartered medical colleges in good standing in the States in which they exist. The Board has power to issue certificates to all who furnish satisfactory proofs of having received degrees or diplomas from chartered medical colleges in good standing, and pass a satisfactory examination before the Board. Examinations are to be made wholly or partially in writing, and the Board may refuse to issue certificates to individuals guilty of immoral or dishonorable conduct, the nature of which must be stated in writing, and it may revoke them for like causes. The persons, however, may appeal to the Chief Justice of the State, and he may affirm or overrule the decision of the Board. Any person practicing medicine or surgery in the State, without a certificate or contrary to the provisions of the statute, is to be deemed guilty of a misdemeanor. Any person is regarded as practicing medicine within the meaning of the act, who shall treat, operate or prescribe for any physical ailment of another for a fee, or hold himself or herself by any means as a physician or surgeon ; but serving in case of emergency, and the administration of family medicines are not prohibited. Commissioned surgeons of the Army of the United States, in the discharge of their special duties, and visiting physicians in the act of consultation, are also exempted.

Persons desiring to practice Obstetrics must apply to the Board of Examiners for a certificate, and pass a proper examination. Any person practicing Obstetrics without a license or certificate from the Board will be deemed guilty of a misdemeanor. But the exception is added: "Nothing in

this section shall be construed to apply to physicians holding certificates in accordance with this act, or to prohibit service in case of emergency, or to persons practicing Obstetrics where there are no licensed practitioners, or prohibiting a fee therefor."

Vermont, 1876. Physicians are licensed in Vermont by the Censors of the several medical societies holding a charter from the General Assembly of the State. Every society elects a Board of Censors of three members, who hold office for a year and till others are chosen, and are authorized to examine and license practitioners of Medicine, Surgery or Midwifery. They are empowered, in their discretion, to notify practitioners of the terms of the statute, and to require them to comply with these within thirty days, but may extend the time to ninety days. They give a certificate after the examination, setting forth the branches of the medical profession in which they have found the recipient qualified, and licensing him accordingly to practice those branches within the State. The recipient must procure this certificate to be recorded in the Clerk's office of the county in which he resides, or if he is not a resident of the State, it must be so recorded in the county in which it was obtained. The certificate, after it has been recorded, is valid through the State. The Censors may revoke or annul it, if in their judgment the person has obtained it fraudulently, or has forfeited his right to public confidence by conviction of crime.

A practitioner who by sign or advertisement offers his services to the public, or assumes the title of "Doctor" must obtain a certificate from one of these societies, either from a county, district or State society. A person not a resident of Vermont who has not received a diploma from a medical college, must obtain a certificate from a Board of

Censors before he is permitted to practice the Medical Art in the State. Each Board issues certificates without fee to physicians and surgeons who furnish evidence by diploma from a medical college or university, or by certificate of qualification by an authorized Board, which satisfies the Censors that the person presenting such credentials has been, after due examination, deemed to be qualified to practice the branches mentioned in the diploma or certificate. No person practicing in either of the branches of medicine, surgery or midwifery in the State is permitted to enforce in the Courts the collection of a fee or compensation for services rendered, or for medicine or material furnished, in the practice of any of the branches for which he has not a certificate. But this provision, and other penalties do not apply to the practice of dentistry, nor to the practice of midwifery by women, nor to physicians who were in practice five years before November 28, 1876.

A person who practices medicine, surgery or midwifery in the State, or signs a certificate of death for purposes of burial or removal, unless he is authorized to do so by a certificate duly recorded, is liable to a fine of $50 to $200 for the first offense and $200 to $500 for each subsequent offense; which fine may be recovered by an action of debt for the use of any person who sues for it, or by indictment.

Virginia, 1894. There is in Virginia a Board of Medical Examiners appointed by the Governor for a term of four years. It consists of one member, a physician, from each Congressional district, and two from the State at large who are selected from names recommended by the Medical Society of the State of Virginia, and two in addition, Homœopathic physicians nominated in like manner by the Hahnemann Medical Society of the Old Dominion. The Board examines all persons who make application, who de-

sire to commence the practice of medicine in the State; and when an applicant passes an examination satisfactory as to efficiency before the Board in session, the president of the Board grants him a certificate to that effect. An applicant who fails to pass an examination may not be examined till six months afterward, or till the next meeting of the Board. "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."

When in the opinion of the President of the Board any applicant has been prevented by good cause from appearing at the meeting of the Board, he may appoint a committee of three members who shall examine the applicant, and if they see fit, grant him a certificate which shall be of full force and effect till he can appear at a meeting of the Board. If he does not appear the president may revoke the certificate or extend the permit to another opportunity, in his discretion.

The certificate when granted, must be rccorded in the Clerk's office of the county or corporation in which the holder resides, before he may lawfully engage in practice. If he resides in Richmond it must be recorded in the Clerk's office of the Chancery Court of that city; but if he does not reside in the State, he must cause it to be recorded where he offers to practice, in the Clerk's office of the county or corporation, or in the clerk's office of the Chancery Court of Richmond. The penalty for practicing medicine or surgery in the State in violation of the statute is a fine of $50 to $500 for each offense, and forfeiture of all right to compensation for the service rendered.

Washington, 1890. There is a State Medical Examining Board appointed by the Governor. It consists of nine

members, who are sworn "to well and faithfully and without partiality perform the duties of such office according to the best of their knowledge and ability." Every person desiring to commence the practice of Medicine and Surgery, or either of them, must make application to the Board for a license. This must be supported and accompanied by an affidavit of the applicant setting forth the actual time spent by him in the study of Medicine, and when; whether it was in an institution of learning. and if so, the name and location of the institution; and if not, then where and under whose tutorship it was prosecuted; the time engaged, if at all, in the actual practice of Medicine and Surgery, and where located at the time; and the age of the applicant at the time of making the application. He must then at the time and place designated by the Board, or at a regular meeting, submit to an examination in Anatomy, Physiology, Chemistry, Histology, Materia Medica, Therapeutics, Preventive Medicines, Practice of Medicine, Surgery, Obstetrics, Diseases of Women and Children, Diseases of the Nervous System, Diseases of the Eye and Ear, Medical Jurisprudence, and such other branches as the Board deem advisable. The examination is directed to be both scientific and practical, and of sufficient severity to test the fitness of the candidate to practice medicine and surgery. It shall be written or printed, or partly written and partly printed, questions and answers, and filed to be preserved. If the examination is satisfactory the Board grants a license to practice. This requires the consent of five members.

The Board may refuse or revoke a license for "unprofessional or dishonorable conduct," by which is defined: 1. The procuring, or aiding or abetting in the procuring of a criminal abortion. 2. The employing of what is popularly known as "cappers" or "steerers." 3. The obtaining of

any fee on the assurance that a manifestly incurable disease can be permanently cured. 4. The wilful betraying of a professional secret. 5. All advertising of medical business in which untruthful and improbable statements are made. 6. All advertising of any medicines or of any means by which the monthly periods of women can be regulated, or the menses re-established if suppressed. 7. Conviction of any offense involving moral turpitude. 8. Habitual intemperance. A brief and concise statement of the grounds and reasons of the procedure and the decision of the Board in writing is to be filed in the office of the Secretary. But before a license can be revoked a complaint of some person under oath, stating the acts of unprofessional and dishonorable conduct, must be filed with the Secretary of the Board; and a written notice and copy served upon the person accused, with an appointment of time and place of hearing, which must be at least ten days afterward. He may appear with counsel and witnesses for defense, and present other in his own behalf.

In the case of refusal or revocation of a license, the applicate or the licentiate has the right to appeal within thirty days to the Superior Court in and for the county in which the meeting of the Board was held prior to such action. In case of such appeal the cause will be tried *de novo*. After it is decided, either party may appeal to the Supreme Court within sixty days thereafter. But no license shall be granted to the applicant, or revocation made, while the controversy is pending. In case the final decision of the Supreme Court be against the Board, then the Court shall make such order as may be necessary, and the Board shall act accordingly.

After receiving the license the holder must file it with the County Clerk in and for the county in which he resides, and

if he removes into another county he or she must procure a certified copy and file it in the office of the County Clerk of that county. In case the license is revoked the County Clerk must make a memorandum of that fact. Any person practicing medicine or surgery in the State without having obtained a license, or contrary to the provisions of the statute, incurs a penalty of a fine of $50 to $100, or imprisonment for ten to ninety days, or both fine and imprisonment. A person comes within the scope of the enactment who appends the letters "M. D." or "M. B." to his or her name, or for a fee prescribes, directs or recommends for the use of any person, any drug or medicine or agency for the treatment, cure or relief of any wound, fracture or bodily injury, infirmity or disease: dentists, however, are excepted.

West Virginia, 1895. The Board of Health of West Virginia consists of two persons from each Congressional District of the State, appointed by the Governor. They must be graduates of reputable medical colleges, who have practiced medicine for not less than twelve years continuously. A majority constitutes a quorum. The Board, at such times as a majority deems proper, holds examinations for the licensing of practitioners of medicine. There must be not less than three of these in each year, and they are to be held at such places as are convenient to candidates and to the Board. At these examinations written and oral questions are submitted to the applicants for license, which must be of an elementary and practical character, embracing the general subjects of Anatomy, Physiology, Chemistry, Materia Medica, Pathological Anatomy, Surgery and Obstetrics, but sufficiently strict to test the qualifications of the candidate as a practitioner of Medicine, Surgery and Obstetrics. But females practicing midwifery are not re-

quired to undergo such examination. Physicians from other States who are duly qualified to practice medicine therein, and are called into consultation in this State by a physician legally qualified, are also exempt from these requirements. Every person holding a certificate must procure it to be recorded in the office of the Secretary of the State Board of Health.

"No applicant for license to practice medicine in this State shall be rejected because of his or her adherence to any particular School or Theory of Medicine. The State Board of Health shall call to their assistance in the examination of any applicant who professes the Homœopathic or Eclectic School of Medicine, a Homœopathic or Eclectic physician duly licensed to practice medicine in the State, and such Homœopathic or Eclectic physician so called to the assistance of the State Board of Health shall be allowed the same *per diem* and actual expenses incurred hereafter allowed to regular members of the State Board of Health."

Any person practicing or attempting to practice Medicine Surgery or Obstetrics in the State without having complied with the provisions of the statute, incurs the penalty of a fine from $50 to $500 for every such offense, or imprisonment for one to twelve months, or both, at the discretion of the Court. Any person will be regarded as practicing medicine who shall publicly profess to be a physician, and to prescribe for the sick, or who shall append to his name the letters "M. D." This provision applies also to apothecaries and pharmacists who prescribe for the sick, but not to commissioned officers in the service of the United States.

Wisconsin, 1897. The Wisconsin Board of Medical Examiners is appointed by the Governor. The appointments are made from three separate lists of ten names each, which are presented to him every second year, one by the

Wisconsin State Medical Society, one by the Homœopathic Medical Society and one by the Wisconsin State Eclectic Medical Society. They must be graduates of a recognized medical college, and representatives of the different Schools of Medicine. No person may be appointed for more than two terms in succession. The statute provides that "three of the appointees shall be Regulars, and two of them shall be Homœopathic physicians, and two of them shall be Eclectic physicians, and vacancies in said Board may be filled as they occur by appointment from said list, preserving the same proportion of the different Schools of Medicine." No member of any medical college, or university having a medical department, may be appointed. The Board holds regular meetings each year on the second Tuesday in January, April, July and October — one in Madison, one in Oshkosh and two in Milwaukee; also other meetings at such times and places as the Board may from time to time determine. It registers applicants for license, the institutions granting degrees and the facts connected with each case.

All persons commencing the practice of Medicine or Surgery in any of their branches in the State, must apply to the Board for license so to do at the time and place designated by the Board, or at the regular meeting, and submit to an examination in the various branches of Medicine and Surgery; or they must present a diploma from a medical college that requires at least three courses of not less than six months each before graduation, no two of the courses to be taken in the same twelve months. The examination in Materia Medica, Therapeutics and Practice of Medicine is conducted by the members of the Board representing the School of Medicine that the applicant claims to follow. The proceedings of the Board are to be open at all reasonable times to public inspection. After examination, or the

presentation of a satisfactory diploma, the Board, if it finds the candidate qualified, will grant a license to the applicant to practice medicine in the State. But a license can be granted only upon the concurrence of five of the members. The Board, after due notice and a hearing, may by unanimous vote, revoke the certificate of any registered person who has been convicted before the proper courts of crime committed in course of his professional business. The license must be recorded with the County Clerk in the county in which the holder resides, with a memorandum of the date, name and time when recorded. In case of removing to another county the license must be recorded there in like manner.

A practitioner from another State, holding a certificate from a State Board that imposes similar requirements, may, on the presentation of a diploma, and the payment of the regular fee, be admitted to practice in the State, at the discretion of the Board, without an examination.

Every person who begins the practice of Medicine or Surgery without having obtained a license, or contrary to the provisions of the enactment, or who not having the license shall advertise or hold himself out to the public as a physician or surgeon or specialist in medicine or surgery in the State, or who shall use the title of "Doctor," or append to his or her name the letters "M. D." or "M. B." meaning thereby Doctor of Medicine, may be deemed guilty of misdemeanor, and be punished upon conviction by a fine of $50 to $100 for each offense, or by imprisonment for three months, or by both fine and imprisonment. Every person is regarded as practicing medicine who appends the letters "M. D." or "M. B." to his or her name, with intent to represent himself or herself as a physician or surgeon, or who for a fee prescribes drugs or other medical or surgical

treatment for the cure or relief of any wound, fracture, bodily injury, infirmity or disease. Dentists in the practice of their profession are not amenable to these requirements.

Wyoming. No person may practice Medicine, Surgery or Obstetrics in Wyoming who has not received a medical education and a diploma from some regularly-chartered medical school having a genuine existence when the diploma was granted. Every physician, surgeon or obstetrician must file a copy of his or her diploma or certificate of graduation with the Register of Deeds of the county in which he or she is engaged in practice, also exhibiting a copy of the original, or a certificate from the dean of the medical school attesting the graduation. It is required also that the person shall be identified by the affidavit of two citizens of the county, or by his or her own affidavit, as to identity. The penalty for not complying with the statute is a fine of $50 to $500, or imprisonment for thirty days to six months, or by both fine and imprisonment for each and every offense. The filing or attempting to file a diploma or certificate as belonging to oneself which belongs to another, or a forged affidavit of identification, is made a felony. The enactment only requires the prosecution to show that the defendant has practiced medicine since it went into effect; and the defendant is not entitled to acquittal except he or she shall prove having received a medical education and holding a genuine diploma from a regularly-chartered medical school.

The exemptions are made in behalf of a person who in an emergency shall prescribe or give advice in Medicine, Surgery or Obstetrics in a section of country where no physician, surgeon or obstetrician resides within convenient distance, also of persons prescribing in their own families,

and persons claiming to practice Medicine, Surgery or Obstetrics in any section where no one having a diploma or certificate of graduation resides.

There have been two reasons offered for this legislation of the later period: one to elevate the standard of practice, and the other to exclude clairvoyants, magnetic physicians and others from being identified as physicians.* The trend of the period is to make all higher education so costly and difficult to procure that only the wealthy may acquire it. In England university education is considered the privilege of the sons of gentlemen, and a yeoman's son who ventures to enter a college or university is made to feel himself classed as an interloper. These medical statutes read as if devised in a like spirit and purpose. They have been enacted, not as constitutional measures, but as warranted by the police power.

* During the winter sessions of 1901, bills have been introduced in the Legislatures of twenty States to place all these in the category of physicians, and subject them to the official examinations.

CHAPTER XVII.

PUBLICATIONS OF AMERICAN REFORMERS IN MEDICINE.

The immortality of a cause is assured by the vitality of its principles, the fidelity of its supporters and the quality of its literature. Generations pass, each in its turn departing from the ways and opinions of those that preceded it, but the Good and True are permanent and without change. The energy which inspires and gives law to Nature is not the dominion of the worse. Evil can not perpetuate itself. Every new doctrine bases its pretensions upon some apparent approximation to the Right. It holds its ground till it is superseded by another of better aims, and while its advocates are earnest and unselfish in its support, not degrading it to the place of a stepping-stone for personal ambitions, or employing it as a means of pecuniary advantage.

The importance of literature as an auxiliary to an enterprise can hardly be estimated too highly. It is a record of what has been thought and done, and perpetuates its remembrance to later times. Every faith that has dominated a people has established itself by its books; and even when succeeded by some newer system it has often appeared in another aspect in the bosom of its successors. Plato, Aristotle and Zeno have given shape and aim to all later opinions; India, China and Egypt of the archaic and prehistoric periods are inspiring the Orient and Occident of the present time, and we are thinking the thoughts of their sages in our own effusions.

Our medical knowledge comes within the same category. The notions which prevailed at a remote antiquity, accounts of which have been unearthed and handed down likewise by tradition and written records, are still current, some as new discoveries and others as time-honored maxims. Yet it is no obligation of ours to adhere more closely to former opinion and usage, than our own intuition and experience will justify. We have our own work to do, and our own record to make. We are obligated by duty as physicians, as well as by our common humanity, to carry forward our art to greater accuracy and perfection, and to make known by every laudable means what we think and know. Our future depends vitally upon the character and sufficiency of our literature.

Right here it behooves us to pay a deserved tribute to those who have faithfully endeavored to render us this service. In Medicine, as elsewhere, he only is great who serves, and the greatest is the one who best serves all. Francis Bacon made a just as well as severe criticism: "Medicine is a science more professed than labored, and yet more labored than advanced — the labor having been more in a circle than in progression." If he had been more a philosopher, he would have known that all progress is in a circle, ascending by a spiral or going downward vortically. It should be regarded as our mission to redeem our art from his imputation. "I hope and believe," said Thomas Jefferson, "that it is from this side of the Atlantic that Europe, which has taught us so many other things, will be led into sound principles in this branch of science, the most important of all, being that to which we commit the care of health and life."

Our pioneers and teachers during the Nineteenth Century have by no means been remiss in their efforts to provide a

literature for the use of their fellows and those who were to come after them. They have, as a general rule, copied little from others, but given simply their own observations, and the results of actual experience. They vary in style from the plain speech of the "plain people" to the more cultured utterances of schoolmen; very generally, however, without effort at display. They were in keeping, however, with the general attainments of the times, and equal, if not superior to, analogous productions from writers in the other Schools of Medicine. They ignored the arts of the charlatan, and the characteristic vaunting of the pretender to superior knowledge.

A very complete collection of the publications of the Reformers in Medicine of the several Schools, has been made by John Uri Lloyd of Cincinnati. Probably an assortment so perfect can not elsewhere be found, even in the Library of the Surgeon-General at Washington. The diligence which Professor Lloyd has displayed in this undertaking can not be too highly commended and admired. It was a work necessary as a memorial of our bibliography, and is certain to be invaluable to the future student of our medical history. By his generous courtesy in making up a list of the books, pamphlets and periodicals in his collection, we are enabled to present a more perfect catalogue of publications the production of writers on reform in Medicine, than could otherwise have been obtained. We accordingly begin with the Lloyd Library. The names marked with an asterisk belong in the category of Botanic and Thomsonian Physicians, who have never affiliated with the Eclectic School of Practice.

MEDICAL PERIODICALS.

I. American Eclectic Medical Review.. R. S. Newton, P. A. Morrow. New York. See also LXVII.

II. American Journal of the Indigenous Materia Medica. Incomplete. B. Keith. New York. 1860.

III. American Journal of Medicine. S. H. Potter. (Vol. II, No. 7.) Syracuse, N. Y. 1852.

*IV. American Journal of Medical Reform. Jos. D. Friend and Hermes M. Sweet. 1851, 1852. See also L.

V. American Medical Journal. Vol. I, 1856-7. By the Faculty of the American Medical College. Cincinnati.

VI. American Medical Journal. George C. Pitzer, Edwin Younkin, Mont. M. Hamlin. Complete from 1875 to 1898, except No. 10 of Vol. VIII, October, 1898, which is wanted. St. Louis.

VII. American Medical and Surgical Journal. S. H. Potter, Dwight Russell. Vol. I, 1851; Vol. II, 1852, Nos. 4, 6, 8 on hand. For title of Vol. II see No. III above. Consolidated with No. XXVIII and merged into No. LXXXVII. Syracuse, New York.

VII. a. American Medical and Surgical Journal. S. H. Potter, E. R. Stockwell, J. Kent. Vol. VII, Nos. 8, 10, 11, 12; Vol. VIII, 1856, Nos. 1, 2. For previous volumes see LXXXIII. Syracuse and Cincinnati.

VIII. Annual of Eclectic Medicine and Surgery. Finley Ellingwood, John V. Stevens. Vols. I-VIII, 1890-1897. Chicago.

IX. Annual of the Eclectic and Liberal Association of Eastern Indiana. N. G. Smith. Begun 1879. Incomplete. Lewisville, Indiana.

X. Arkansas Eclectic Medical Journal. W. L. Leister. Vols. I, II. Complete. Continued as No. LXXXIIIa. Little Rock, Arkansas.

*XI. Australian Botanic Practitioner. John Broadbent. 1891-92. Incomplete. Melbourne, Australia.

*XII. Bostonian Thomsonian Medical Journal. Vol. I, 1845-46. Complete. Boston.

*XIII. Boston True Thomsonian. Vol. I, 1840 to Vol. II, 1842. Complete. Boston.

*XIV. Botanic-Eclectic Review and Medical Tribune. D. Turnbull. 1885-89. Incomplete. London, England.

*XV. Botanic Medical Reformer and Home Physician. Thomas Cooke. Vol. I, 1841 and Vol. II, 1842. Later volumes wanted. Philadelphia.

*XVI. Botanic Practitioner. Thomas Butterfield. 1892. London, England.

*XVII. Botanic Practitioner. John Simmons. Quarterly. Incomplete. Hyde, England.

*XVIII. Botanic Medical Recorder. Alva Curtis, William H. Cook Vol. XI, 1843 to Vol. XIV, 1847, and Vol. XVII, 1851 to Vol. XIX, 1853, on hand. Wanted, 1839 to 1842, Vols. VIII to X; 1848 to 1850, Vols. XV, XVI, and all after 1853, Vol. XIX. For previous numbers see No. LXXXVI. Cincinnati.

XIX Buchanan's Journal of Man. Joseph Rodes Buchanan. Vols. I, II, III. Complete. Boston.

XX California Medical Journal. Complete from 1880 except index missing in Vol. III, 1883. San Francisco.

XXI. Chicago Medical Times. Robert A. Gunn; later, H. D. Garrison, W. H. Davis, A. L. Clark, Finley Ellingwood. Complete from 1869 to 1898, except Nos. 9 and 12, and Index of Vol. III, (1871-73), No. 6 of Vol. VII, (1875-76), and Index of Vol. IX, 1877-78. Chicago.

*XXII. Cincinnati Medical Recorder. William H. Cook. Vol. LI, Nos. 1, 2, 6 on hand. Cincinnati.

XXIII. Eastern Medical Journal. A. J. Marston. We have Vols. III, 1884, and VI, 1886, complete. Missing, Vol. IV, Nos. 2, 6; Vol. VII, 1887, No. 10; and following

numbers. Continuation of No. LVII. Worcester, Massachusetts.

XIV. Eclectic Medical Journal, [last series]. John M. Scudder. Vols. I, II, III, (1870-71), on hand. Complete. Cincinnati.

XXV. Eclectic Health Journal. Richard A. Hasbrouck. Vol. I, 1892, Nos. 1-4, 6-12; Vol. II, 1893, complete; Vol. III, 1894, 1-4, 6-8. Salt Lake City, Utah.

XXVI. Eclectic Journal and Family Adviser. W. W. Johnston and W. H. Price. Vol. I, 1894, Nos. 1-8. Carthage, Missouri.

*XXVII. Eclectic Journal of Medicine. John Bell. Four volumes, 1836-40. Philadelphia.

XXVIII. Eclectic Journal of Medicine. Levi Reuben and L. C. Dolley. Vols. III, IV, July 1851 to December 1852. Complete. For previous issue see No. LXVIII. Consolidated with No. VII, and merged into No. LXXXVII. Rochester, New York.

XXVIII. a. Eclectic Journal of Science. Vol. II, 1835. Previously No. XXX.

XXIX. Eclectic Medical Advocate. S. House and A. Wilder. Vol. VI, old series, or Vol. I, new series, 1884, complete without index; Vol. II, 1885, complete with index; Vol. III, 1886, complete without index; Vol. IV, 1887, incomplete. New York.

*XXX. Eclectic and Medical Botanist. William Hance. Vol. I, 1835. Probably continued as No. XXXVI, [which is not named.] Columbus, Ohio.

XXXI. Eclectic Medical Journal. Thomas V. Morrow, Jos. R. Buchanan, R. S. Newton. No. I, 1849, till date. Preceded by No. XCI. Cincinnati.

XXXII. Eclectic Medical Journal of Pennsylvania.* John Buchanan. Vol. VI, 1868, No. 11; Vol. VII, 1869; Vol. XI, 1873, No. 3; Vol. XII, 1874, No. 1; Vol. XV, 1877, Nos. 7, 8, 9; Vol. XVI, 1878, Nos. 1-4, 7, 8, 11. 12; Vol. XVII, 1879, Nos. 5-12; Vol. XVIII, 1880, Nos. 1-6 are on hand. Others are wanted. Continued later as No. LI. Philadelphia.

XXXIII. Eclectic Medical Journal of Philadelphia. Wm. Paine. Vol. I, 1858 to Vol, IV, 1861, complete; Vol. V, 1862, Nos. 5 and 8 wanted; Vol. VI, 1863, Nos. 3-6 and 8-12 wanted; Vol. VII, complete; the title having been changed to No. XXXV.† Philadelphia.

XXXIV. Eclectic Medical Record and Psychological Review. J. C. Lewis. Begun 1869. Incomplete. Indianapolis.

XXXV. Eclectic and University Journal of Philadelphia. William Paine. Vols. VII and VIII. Complete. Continued as No. LXXXIX, Previously No. XXXIII.

XXXVI. Wanting.

XXXVII. Eclectic Review. G. W. Boskowitz. Vols. I, II, 1890, 1891. Complete. New York.

XXXVIII. English Eclectic Medical Practitioner and Journal of Medical Dissent. J. Simmons. Vol. I, 1894. Is incomplete. Hyde, England.

XXXIX. Family Journal of Health. J. M. Scudder. 1860. Incomplete. Cincinnati.

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* The Eclectic Medical Journal of Pennsylvania was conducted originally by Doctors Thomas Cooke and Hollembaek of the Eclectic Medical College, and afterward by Dr. William Paine. After several years Dr. Paine separated abruptly from the Faculty, and set up a rival institution, and began the publication of No. XXXIII. Dr. Hollembaek began The Quarterly Eclectic Medical Journal of Pennsylvania, July, 1862, Vol. I, No. 1, which a year or two later passed into the hands of Dr. John Buchanan.

† Dr. Paine having established a second medical college in Philadelphia, endeavored to procure the approval of the neighboring medical societies. Not succeeding in this, he announced himself in the May number of this volume (1865) as "parting with the venerable name of *Eclectic*," and afterward declared himself "no longer an Eclectic" but "a new-school practitioner of Medicine. As, however, he did not form a party, nor change his mode of practice, his publications are still enumerated as before.

XL. Georgia Eclectic Medical Journal. Vol. IV, and all from Vol. VII, 1884-5 to 1898 are complete. Other volumes incomplete. Atlanta, Georgia.

XLI. Independent Medical Investigator. S. S. Boots and J. L. Marsh. Vol. I, 1879-80, and Vol. II, 1880 to May 1881, are complete. Combined with the June number, 1881, of No. XLIII. In August 1883 Dr. Boots revived the *Investigator*. Vol. II, 1883-84, Nos. 1-9 is on hand. Probably complete. Greenfield, Indiana.

XLII. Indiana Eclectic Medical Journal. G. W. Pickerill. Vol. III, 1885, to Vol. VI, 1888. Complete. Other volumes incomplete. Continued later as No. LIX. Indianapolis.

XLIII. Indiana Medical Journal. Daniel Lesh. Published by the Trustees of the Indiana Eclectic Medical College. Vol. I, 1881-82. Complete. Other volumes wanted. Indianapolis.

XLIV. Journal of Eclectic Medicine. Begun in 1891. Incomplete. Morristown, Tennessee.

XLV to XLIX. Omitted.

*L. Journal of Medical Reform. Friend and Sweet. 1854. See No. IV. New York.

LI. Journal of Progressive Medicine. John Buchanan. Preceded by No. XXXII. Incomplete. Philadelphia.

LII. Journal of Rational Medicine. C. H. Cleaveland. Vol. I, 1868 to Vol. III, Complete. Subsequent volumes wanted. Cincinnati.

LIII. Iowa Medical Journal. John G. Hill and H. O. Conoway. Begun in 1884. Incomplete. Des Moines.

LIV. Iowa Eclectic Medical Journal. O. H. P. Shoemaker. Begun in 1884. Incomplete. Des Moines.

LV. Kansas Medical Journal. J. Milton Welch. Begun in 1883. Incomplete. Topeka and La Cygne.

LVI. a. Keystone Medical Journal. H. B. Piper, A. B. Woodward. Vols. I, II, III. Complete. Tunkhannock and Tyrone, Pennsylvania.

*LVI. b. Lobelia Advocate and Medical Recorder. John Rose. Vol. I, 1839. Baltimore.

LVII. Maine Medical Journal. A. J. Marston. Vol. I, 1882, complete; Vol. II, 1883, 1-7. Continued as No. XXIII. Lewiston.

LVIII. a. Massachusetts Medical Journal. H. G. Barrows and Robert A. Reid. Vols. III to VIII, 1883-88, also 1896-98, complete. Others incomplete. Boston.

LVIII. b. Medical Eclectic. Alexander Wilder and R. S. Newton. Vol. III, 1876, and Vol. V, 1878, complete; Vols. I, 1873-74, II and IV, incomplete. Continued as No. LXIX. Preceded by Nos. I and LXVII. New York.

LIX. Medical Free Press. G. W. Pickerill. Vols. VIII, 1890, and X, 1892-93, complete. Others incomplete. Discontinued in 1895. Preceded by No. XLII. Indianapolis.

LX. Medical Gleaner. W. C. Cooper and W. E. Bloyer. Begun in 1889. Complete. Cleves and Cincinnati.

*LXI. a. Medical Independent. H. Goadby, E. Kane, L. G. Robinson. Vols. I, II, 1846, on hand. Detroit.

LXI. b. Medical Independent. William Paine. Vol. XIV. Incomplete. (Probably supplementary to No. XXXV.) Philadelphia.

LXII. Omitted.

LXIII. Medical Tribune. Robert A. Gunn and Alexander Wilder. Vols. I, 1878, to VIII, 1892, complete except No. 11 of Vol. II, September, 1881. Vol. VI was interrupted in 1884 and resumed as Vol. VI in 1890. Of Vol. VI in 1884 we have Nos. 1-6; of Vol. VI, 1890, No.

2 (May) is missing. Volumes subsequent to Vol. VIII are incomplete. New York.

*LXIV. Middle States Medical Reformer. Palemon John and John S. Prettyman. Vols. I to III, 1854-5, and Vol. IV, 1857, Nos. 1-5, on hand, except Index to Vol. III. Millville, Pennsylvania.

LXV. Monthly Mirror. Robert A. Gunn. Vol. I, 1873-74,. Followed by No. LXIII. New York.

LXVI. a. Nebraska Medical Journal. W. S. Latta. Begun 1884. Incomplete. Lincoln.

*LXVI. b. New England Botanic and Surgical Journal. Calvin Newton. We have Vol. I, 1847. Vol. VI, 1851; Vol. VII, 1852; Vol. VIII, 1853; Vol. X, 1855. All others wanted. In Vol. VI it became No. XCIV. [It was preceded by the New England Medical Eclectic.] Worcester, Massachusetts.

LXVII. New York Eclectic Medical Review. R. S. Newton, Edwin Freeman, P. Albert Morrow. Vols. I to V, 1866-1870. Complete. Also Vol. VII, 1871-72. Complete. Vol. VI is missing. In Vols. III to VII the title is changed to No. I. New York.

LXVIII. New York Eclectic Medical and Surgical Journal. William W. Hadley* (and S. H. Potter). Complete set, Vols. I, II, 1849 to June, 1851. Continued as No. XXVIII. Syracuse. N. Y.

LXIX. New York Medical Eclectic. R. S. Newton. Vol. VI, 1879, complete; Vols. VII and VIII, incomplete. Preceded by No. LVIII b. New York.

LXX. Paine's Journal of Domestic Medicine. William Paine. Vol. I, 1873. Incomplete. Philadelphia.

LXXI. Omitted.

* Dr. Hadley afterward conducted the New York Pathological Journal at New York, and died in 1870.

LXXII. People's Medical Monthly. Edwin F. Rush. Begun 1886. Incomplete. Chicago.

*LXXIII. Philadelphia Botanic Sentinel and Thomsonian Medical Revolutionist. Vol. III, 1838 and Vol. IV, 1839. All others wanted. Philadelphia.

LXXIV. Philadelphia University Journal of Medicine and Surgery. Joseph Longshore and E. D. Buckman. 1871. Odd numbers. See No. LXXXIX. Philadelphia.

*LXXV. Physio-Medical Journal. George Hasty. Vols. III, 1886, and XIII. Complete. All others incomplete. Indianapolis.

*LXXVI. Physio-Medical Recorder and Surgical Journal. Vols. XVII, 1849, and XVIII, 1850. Complete. All other volumes wanted. Continued as No. LXXVII. Cincinnati.

*LXXVII. Physio-Medical Recorder and Surgical Journal. Vol. XIX, 1851. Other volumes wanted. Preceded by No. LXXVI.

*LXVIII. Physio-Medical Era and Journal of Health. N. K. Hard and D. W. Bloom. Vol. I, 1849-50. No. 10 missing. All other volumes wanted. Mount Vernon, Ohio.

LXIX. St. Louis Medical Journal. George H. Field. Vols. II. 1875, and XIII, 1888. Complete. All others incomplete. St. Louis.

*LXXX. Sanative Medicine. G. H. Mayhugh and afterward T. J. Lyle. Begun 1891 and complete to date. Westerville and Salem, Ohio.

LXXXI. Omitted.

*LXXXII. Southern Botanic Journal. D. F. Naudain. Vol. I, 1836. Subsequent volumes wanted. Charleston, South Carolina.

LXXXIII. a. Southwestern Progressive Medical Journal. W. L. Leister. See No. X. Rogers, Arkansas.

LXXXIII. b. Syracuse Medical and Surgical Journal. S. H. Potter. Vol. VI, 1854, or Fourth Series, Vol. I, Nos. 1-11, February to December. Complete. Preceded by No. LXXXVII and succeeded by No. VII. c. Syracuse, N. Y.

*LXXXIV. Thomsonian Medical Revolutionist. See No. LXXIII. Philadelphia.

*LXXXV. Thomsonian Messenger. O. B. Lyman. Vols. I, II, 1842-3. Norwich, Connecticut.

*LXXXVI. Thomsonian Recorder. Vol. I, 1883 to Vol. VII, 1838, on hand. Continued later as No. XVIII. Columbus, Ohio.

LXXXVII. Union Journal of Medicine. Levi Reuben and S. H. Potter. Vol. V, 1853, Nos. 1-7. Wanted, 8-12. Preceded by Nos. VII and XXXVIII. Continued by Dr. Reuben in New York, and followed by Dr. Potter as No. LXXXIII. b. Syracuse and New York.

LXXXVIII. United States Medical Investigator. Duncan Brothers. Begun 1865. Incomplete. Chicago.

LXXXIX. University Journal of Medicine and Surgery. Odd numbers of 1857-70 on hand. Continued in 1871 as No. LXXIV. Preceded by No. XXXV. Philadelphia.

XC. West-American Review. G. W. L. Bickley. Begun 1853. Vol. I. Complete. Cincinnati.

XCI. Western Medical Reformer. Thomas Vaughan Morrow, I. G. Jones and associates in Worthington Medical College. 1836 to 1843. Complete set. Continued as No. XXXI.

XCII, XCIII. Omitted.

XCIV. Worcester Journal of Medicine. F. H. Kelley. Preceded by LXVI. b. Worcester, Mass.

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King, John. Introductory Lecture at the Eclectic Medical Institute, Cincinnati. 1852.

King, John. Special Medical Legislation. An Address Delivered before the National Eclectic Medical Association at its Annual Meeting in Cincinnati in June, 1884, and published by order of the Association.

King, John. The Coming Freeman. [Non-medical.] Cincinnati. 1890.

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*Kost, John. The Practice of Medicine, Embracing a

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*Kost, John. Elements of Materia Medica and Therapeutics. Cincinnati. 1849.

*Kost, John. Domestic Medicine. Cincinnati. 1849.

*Kost, John. Text-Book of Medical Jurisprudence. Cincinnati. 1885.

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Lloyd, J. U. Life of A. J. Howe, M. D. Cincinnati. 1894.

Lloyd, J. U. Drugs and Medicines in North America. Cincinnati. 1874-5.

McClanahan, J. T. Rhus Aromatica. A Paper Read at the Meeting of the National Eclectic Medical Association at St. Louis in 1881.

McPheron, E. Melvin. Eclecticism versus Allopathy. Reprinted from the *Eclectic Health Journal*. Salt Lake City, Utah. 1882.

Massie, J. C. A Treatise on the Eclectic Southern Practice of Medicine. Philadelphia. 1854.

Mayer, Edward R. Specific Medication. Hints Toward a Better Knowledge of Methods and Substances Used. Pittston, Penn. 1876.

Meader, L. P. The People's Medical Companion and Family Guide. Cincinnati. 1861.

Meader, L. P. The People's Physicians. Cincinnati. 1860.

Miller, Charles N. Should There Be a Law to Regulate the Practice of Medicine? (Negative argument.) (From California *Medical Journal*, January, 1899. San Francisco.

Miller, Charles N. The Corset: Thereby Hangs a String. (From California *Medical Journal*, November, 1898. San Francisco.

*Monill, G. A. and Brown D. P. Trial of Doctor Frost. Philadelphia. 1838.

Morrow, P. Albert. See American Medical Review.

Morrow, Thomas V. See Jones, I. G.

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Newton, Robert S. See also Sherwood Wm., Powell Wm. Byrd, The American Eclectic Medical Review, The American Medical Register, The Medical Eclectic. New York.

Niederkorn, J. S. A Ready Guide to Specific Medication. Bradford, Ohio. 1893.

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Paine, William. Principles and Practice of Medicine. Second Edition. Philadelphia. 1868.

Paine, William. Medical Properties, and Users of Concentrated Medicines. Philadelphia. 1865.

Paine, William. An Epitome of the American Eclectic Practice of Medicine. Philadelphia. 1857.

Paine, William. History of the Rise, Progress and Principles of the American Eclectic Practice of Medicine (taken from Journal of the Franklin Institute.) Philadelphia. 1849.

Piper, Henry B. Inaugural Address as President of the Pennsylvania Eclectic Medical Association, at Altoona, October, 1878. (Published in N. Y. Medical Eclectic.)

Piper, Henry B. Address before the Pennsylvania Eclectic Medical Association at Bellefonte, 1879.

Pitzer, George C. Eclectricity in Medicine and Surgery. St. Louis. 1893.

Potter, Stephen H. Compendium of Principles and Practice of Medicine. Second Edition. Hamilton, Ohio. 1897.

Potter, Stephen H. Notes of Lectures on the American Practice of Medicine. Syracuse, N. Y. 1855.

Potter. Stephen H. See the American Medical and Surgical Journal. Syracuse Medical and Surgical Journal.

Powell, William Byrd. The Natural History of the Human Temperaments. Second Edition. Cincinnati. 1869.

Powell, William Byrd, and R. S. Newton. The Eclectic Practice of Medicine. Cincinnati. 1854.

Prettyman, John S. See Middle States Medical Reformer.

Priest, N. L. Medical Companion. Exeter, New Hampshire. 1838.

Rafinesque, Constantin S. Manual of the Medical Botany of the United States of America. Two volumes. Philadelphia. 1828, 1830.

Rafinesque, Constantin S. The Pleasures and Duties of Wealth. Philadelphia. 1830.

Rafinesque, Constantin S. American Manual of the Grape Vine and the Art of Making Wine. Philadelphia. 1830.

Reeve, J. C. The Latest System in Medicine. Columbus, Ohio.

Reuben, Levi. See Union Journal of Medicine.

Rogers, H. N. See Transactions of Wisconsin Eclectic Medical Society.

Scudder, John K. Table of Specific Indications and Doses of Eclectic Remedies. Revised to May 1893. Cincinnati.

Scudder, John K. Eclectics and Life Insurance. Eclectic Medical Journal, May, 1898.

Scudder, John K. Fair Medical Legislation, in Transactions of National Eclectic Medical Association for 1897.

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Scudder, John M. Obituary by John Fearn. Oakland, California.

Scudder, John M. Tribute, by W. H. Hartley. Sydney, Australia. From Eclectic Medical Journal. Cincinnati.

Scudder, John M. Specific Medication — What is It?

Scudder, John M. A Brief History of Eclectic Medicine. 1879.

Scudder, John M. The Essential Differences Between the Three Schools of Medicine.

Scudder, John M. On the Use of Medicated Inhalations. Cincinnati. 1866.

Scudder, John M. On the Use of Medicated Inhalations. Fourth Edition.

Scudder. John M. Specific Medication and Specific Medicines. Seventh Edition. Cincinnati. 1876.

Scudder, John M. Specific Medication and Specific Medicines. Tenth Edition. 1881.

Scudder, John M. See Materia Medica.

Scudder, John M. The Family Journal of Health. February to July. Cincinnati. 1860.

Scudder, John M. The Eclectic. Three volumes. Cincinnati. 1870-71.

Scudder, John M. Domestic Medicine, or Home-Book of Health. Vol. I. Complete. Cincinnati. 1865.

Scudder, John M. Specific Diagnosis, Fourth Edition. Cincinnati. 1878.

Scudder, John M. The American Eclectic Materia Medica and Therapeutics. Eleventh Edition. Revised and Rewritten. Cincinnati. 1891.

Scudder, John M. Practical Treatise on Diseases of Women. Fourth Edition. Cincinnati. 1866. Fifth Edition. 1877.

Scudder, John M. Some Miscellaneous Writings of the late Dr. Scudder — "Some Reminiscences."

Scudder, John M. Official Announcement of the Death of Dr. Scudder by Officers of National Eclectic Medical Association, with Obituary by G. W. Pickerill, in Medical Free Press.

Scudder, John M. and Sons. Catalogue headed: "Of Interest to Every Eclectic Physician."

Sherwood, William. Introductory Lecture on Medical Education, at Eclectic Medical Institute, 1852.

Sherwood, William. History of the Expulsion of Doctors Robert S. Newton and Zoheth Freeman from the Eclectic Medical Institute. 1854.

Simmons, N. See Journal of Kansas Eclectic Medical Association.

Thomas, Rolla L. Eclecticism, The American System of Medicine. Read before the Wisconsin Eclectic Medical Society, 1867.

Watkins, Lyman. An Eclectic Compendium of the Practice of Medicine. Cincinnati. 1895.

Webster, Herbert T. Principles of Medicine. Oakland, California. 1891.

Webster, Herbert T. Dynamical Therapeutics. Assisted by J. Uri Lloyd and Kent O. Foltz. Oakland. 1893.

Webster, Herbert T. Dynamical Therapeutics. Assisted by

J. U. Lloyd and Kent O. Foltz. Second Edition. San Francisco. 1898.

Weyer, A. The Family Physician, or Poor Man's Friend. St. Clairsville, Ohio. 1881.

Wilder, Alexander. See Transactions of the National Eclectic Medical Association, Vol. V, 1877, to Vol. XXIV, 1895. (As Secretary and contributor.)

Wilder, Alexander. See Medical Tribune. Medical Eclectic.

Wilder, Alexander. Biography of Wooster Beach in Eclectic Medical Journal. 1893.

Wilder, Alexander. Plea for Collegiate Education of Women. N. Y. 1874.

Wilder, Alexander. Intermarriage of Kindred. (Approving.) 1870.

Wilder, Alexander. Perils of Premature Burials. 1871.

Wilder, Alexander. The Soul. 1883.

Wilder, Alexander. Mind and Cerebration.

Wilder, Alexander. Later Platonists. 1884.

Wilder, Alexander. The Ganglionic Nervous System. 1882.

Wilder, Alexander. The Antecedent Life. 1895.

Wilder, Alexander. Life Eternal. 1885.

Wilder, Alexander. The Earlier Period of Reformed Medicine. (From Eclectic Medical Journal.) 1898.

Wilder, Alexander. Scientific Feeding. (In Scientific Man.) 1881.

Wilder, Alexander. Fallacy of Vacination. 1878.

Wilder, Alexander. Jesus of Nazareth. (Clipping from Religio-Philosophical Journal, September, 1879.)

Wilder, Alexander. See also Metophysical Magazine, Journal American Akadémé, Universal Brotherhood, Ideal Review, etc., etc.

Wilkinson, G. E. Botanic-Medical Practice. Cincinnati. 1845.

Complete as the catalogue of Professor Lloyd appears, the number can be largely increased, and even fall short of a perfect enumeration. The early Reformers of different places and shades of sentiment, felt the need of an intelligent statement of their views and procedures. Books were published and periodicals issued, almost in profusion. Some had an existence of many years, while others had only a name for a brief period and were forgotten. Yet their work was done faithfully, and their utterances were not in vain. Public sentiment was changed, and the persecutions which characterized the former years of the Nineteenth Century were brought to an end by legislative action, following in the wake of strenuous effort and a broader intelligence.

The *Botanic Physician*, by Elisha Smith, published in New York in 1830, was a work of merit equal to any of the time.

Dr. Beach's publications underwent many revisions, "The American Practice of Medicine," first issued in three volumes, was afterward condensed and published as *The Family Physician*, in which form it had an extensive sale, and, indeed, is not yet superseded by its numerous successors. He afterward prepared three new volumes, on Surgery, Practice of Medicine and Materia Medica, which quickly found sale. Besides these he published a little manual of Physiology, a Medical Dictionary and a treatise on Midwifery. He by no means confined his labors to the medical field, but for years published a religious periodical setting forth peculiar views on various doctrines and questions of personal duty. They created some agitation at the time, and some of them are still extant in other forms.

The *Digest of Materia Medica* by Albert Merrell, published in Philadelphia, was prepared under the supervision

and with the concurrence of a committee of the National Eclectic Medical Association, and has the official approval of that body. It embraces a full pharmacopœia, and joins the merits of conciseness, thoroughness and fidelity.

The leading members of the Colleges at Philadelphia also wrote works of great value of which the principal ones are likewise here enumerated.

Band, Charles. Eclectic Practice, Its Office and Future.

Band, Charles. Eclectic Materia Medica, New Remedies, Consumption and Its Cure. From Transactions of the National Eclectic Medical Association.

Brown, O. Phelps. The Complete Herbalist. Jersey City, N. J. 1872.

Buchanan, John. The Eclectic Practice of Medicine. 1861.

Buchanan, John. Treatment of Venereal Diseases. 1866.

Ellingwood, Finley. Synopsis of Medical Chemistry. Chicago.

Ellingwood, Finley. Manual of Urinalysis.

Farnum, E. J. Deformities: A Text-Book on Orthopædic Surgery. Chicago.

Foote, E. B. Plain Home-Talk and Medical Common Sense. New York. 1870.

Foote, E. B. Science in Story, or Sammy Tubbs the Boy Doctor and Sponsie the Troublesome Monkey. New York. 1874.

Foote, Edward B. Home Cyclopedia of Popular Medical, Social and Sexual Science, embracing his New Book on Health and Disease, with Recipes Treating of the Human System, Hygiene and Sanitation — Causes, Prevention, Cure, and Home Treatment of Chronic Diseases, Including Private Words for Both Sexes and 250 Practical Recipes: Also Embracing "Plain Home Talk on Love,

Marriage and Parentage. Twentieth Century Revised and Enlarged Edition. New York. 1891.

Foote, E. B. Pathology of the Primary Causes of Disease, Insanity and Premature Death. A Paper Read Before the World's Medical Congress at Chicago, June 1, 1893. New York.

Gunn, Robert A. Treatise on Venereal Diseases. New York. 1876.

Gunn, Robert A. Home Physician. New York. 1883.

Gunn, Robert A. Forty Days Without Food,— Observations of the Famous Fast of Dr. Tanner. New York. 1881.

Gunn, Robert A. Vaccination; Its Fallacies and Evils. New York. 1878.

Hill, Benjamin L. Among the publications by Eclectic writers in Cincinnati not included in the Lloyd Catalogue, was a Treatise on Surgery by Benjamin L. Hill. Dr. W. Sherwood, of the College of Eclectic Medicine, also issued a work on the Eclectic Practice.

Howe, A. J. Fractures and Dislocations. Cincinnati. 1870.

Howe, A. J. Operative Gynæcology. Cincinnati. 1890.

Isaacs, Judah.* Eye and Ear: Their Diseases. Philadelphia. 1861.

JeanSon, J. A. Pathological Anatomy, and Physical Diagnosis.

JeanSon, J. A. Diseases of the Sexual Organs. (Male and Female.)

Kunze, Richard E. The Asclepiadacæ. New York. 1878. Also the Cacti; Cereus Bonplandii in Amaurosis; Cocos Nucifera, Convallaria, Passiflora, Lobelism. From Transactions of National Eclectic Medical Association.

* Dr. Isaacs was a Lecturer on Diseases of the Eye and Ear in the Eclectic Medical College of Pennsylvania.

Lindorme, C. A. F. Medical Practice of the Future. Atlanta, Georgia. 1887.

Lindorme, C. A. F. Intoxicants and Narcotics: Their Relation to the Mental Life. Also a Philosophic Exposition of Man and this World. 1883.

Lindorme, C. A. F. Moral Requisite of the Criterion of Truth. 1885.

Locke, A. J. and H. W. Felter. Locke's Materia Medica and Therapeutics. Cincinnati, Ohio. 1900.

Longshore, Joseph. Practice of Midwifery. Philadelphia. 1866.

Lloyd, J. U. Chemistry of Medicines. Cincinnati. 1881.

Lloyd, J. U. Etidorhpa. Cincinnati. 1898.

Lloyd, J. U. Right Side of the Car. Boston. 1897.

Lloyd, J. U. and H. W. Felter. Materia Medica.

Lloyd, J. U. Reminiscences and Conclusions Drawn From an Obstetric Practice of Twenty-Two Years. Reprint from Massachusetts Eclectic Medical Journal, Vol. I, 1881. Boston.

Miller, M. N.* Treatment of Venereal Diseases. Philadelphia. 1863.

Munn, S. B. Pathogenesis. Waterbury, Conn. 1893. Also "Diabetes," "Cereus Bonplandii," "Old-School Remedies in New-School Practice," "What I Know About Gynæcology," "Are the Moderns Shorter-Lived?"

Newton, Robert S. and W. Byrd Powell. Eclectic Treatise on Diseases of Children. New York. 1867.

An edition substantially a reprint of "Syme's Surgery," was also published under the following head: "Principles and Practice of Surgery." By James Syme of Edinburgh. Edited with Notes and Illustrations. By Robert S. Newton. Cincinnati, 1863. Several other works may also be men-

* Professor of Anatomy in the Eclectic Medical College of Pennsylvania.

tioned. Chapman's Treatise on Ulcers, with Notes, Selections aud Additions. By R. S. Newton.

Pierce, Ray V. The People's Common Sense Medical Adviser. Buffalo, New York. 1875.

Pitzer, Geo. C. Medical Electricity. St. Louis. 1892.

Pitzer, Geo. C. Suggestion in the Cure of Diseases and the Correction of Vices. St. Louis. Now Los Angeles, California. 1898.

Powell, William Byrd. Human Temperaments. Cincinnati.

Prince, William R.* A Treatise on Concentrated Remedies. Flushing, N. Y. 1864.

Rodermund, Matthew J. The Murderous Fads in the Practice of Medicine, and the Cause and Prevention of Disease. Appleton, Wisconsin. 1900.

Sherwood, Wm. Eclectic Practice. Cincinnati, Ohio.

Simpson, Robert A. New Method of Treating Ulcers. Liverpool, Pennsylvania. 1866.

Simpson, Robert A. The Eclectic Practice of Medicine. (Particulars of publication not known.)

Sites, Joseph.† The Eclectric Obstetrics; Diseases of Women and Children. 1861.

Wilder, Alexander. Eclectic Medicine: Its History and Scientific Basis. An Address delivered before the World's Eclectic Medical Congress, auxiliary. 1893.

Wilder, Alexander. Ancient Symbolism and Serpent Worship. A Paper read at the American Akadémé. 1886.

Wilder, Alexander. The Phædo of Plato. Discourse at the Celebration of Plato's Birthday at Jacksonville, Ill.

* Dr. Prince was a well-known Botanic physician in Long Island, and early displayed warm sympathy with the Eclectic movement. He was an amateur and connoisseur in Botanic Science, maintaining a conservatory and cultivating many rare plants. His son, the Hon. L. Bradford Prince, of Santa Fe, New Mexico, possesses similar tastes.

† Professor of Obstetrics in the Eclectic Medical College of Pennsylvania.

Wilder, Alexander. The Practical Value of Philosophy. Address at the Philosophical Symposium of the Illinois College, Jacksonville. 1897.

Wilder, Alexander. Life of Alphonse de Lamartine. 1898.

Wilder, Alexander. Egypt and Egyptian Dynasties. 1899.

Wilder, Alexander. The Fallacy of Vaccination. New York. 1878.

PUBLISHED REPORTS OF MEDICAL SOCIETIES.

Transactions of the National Eclectic Medical Association of the United States of America, Volumes I to IV, 1872 to 1875, by Robert A. Gunn, M. D., Secretary; Vol-V to XXIV, 1876 to 1895, by Alexander Wilder, M. D.; Volumes XXV, XXVI, 1896, 1897, by William E. Kinnett; Volumes XXVII-XXIX, 1898-1900, by Pitts E. Howes, M. D.

Annual Publication of the Massachusetts Eclectic Medical Society. Forty numbers in pamphlet.

Transactions of the Eclectic Medical Association of Arkansas. A. J. Widener, M. D., Secretary.

Transactions of the Connecticut Eclectic Medical Association. Two pamphlets. By Elizabeth G. Smith, M. D., Secretary.

Transactions of the Iowa State Eclectic Medical Society. Pamphlet.

Reports of the Michigan State Eclectic Medical and Surgical Society. Five volumes. By H. S. McMaster, Secretary.

Transactions of the Eclectic Medical Society of the State of New Jersey. Two pamphlets. 1879, 1880.

Transactions of the Eclectic Medical Society of the State of New York. Eighteen volumes. 1867 to 1901.

Report of the Ohio State Eclectic Medical Association. Three Pamphlets.

Report of the Eclectic Medical Association of Pennsylvania. Pamphlet. 1878.

Report of the Texas Eclectic Medical Association. Pamphlet.

PERIODICALS BY ECLECTIC PHYSICIANS.

1. American Journal of Medicine By A. L. Clinkscales. Macon, Georgia. 1873-75. (Representing the Medical College succeeding the Reform Medical College suspended during the Civil War. The title of the publication is conjecturally given.)
2. College Journal. By the Faculty of the College of Eclectic Medicine, including J. R. Buchanan, W. Sherwood, John King and others. Cincinnati. 1856 to 1860.
3. Eastern Medical Reformer. A Monthly Journal of Medical and Chirurgical Science. By Joel R. Hibbard. Rutland, Vermont, 1846.
4. Health Journal. S. H. Potter and J. L. Maffett. Syracuse, N. Y. 1852.
5. Health Monthly. E. B. Foote, New York.
6. Medical Weekly. S. H. Potter.
7. New York Pathological Journal. By William W. Hadley. New York. 1851. But one volume was published.
8. The Alkaloidal Clinic.* By Doctors W. C. Abbott and W. F. Waugh. 1892 to 1901. Chicago.
9. Eclectic Medical Review. Vol. IV. By George W. Boskowitz, M. D. Assisted by the Faculty of the N. Y. Eclectic Medical College. New York. 1901.

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* Representing "American Alkalometry," a mode of treatment identical or analogous to Dosimetric Medication as described in pages 363 to 367. Its method as set forth by Dr. Abbott is the administering of small doses frequently repeated till the required result is produced. — "the smallest possible quantity of the best obtainable means to produce a desired result." The active principle of every drug is adopted in granule form whenever it can be obtained, and in other cases the best Galenic preparations. He describes it accordingly as a "true Eclecticism without any fancies around it."

THOMSONIAN AND BOTANIC PUBLICATIONS.

The earlier Botanic Physicians and Herbalists, especially those who subscribed to the views of Samuel Thomson or took their departure from the doctrines which he promulgated, were indefatigable. They evinced a vast energy in controversy, and their publications were numerous. Some were ephemeral, especially in the line of periodicals, but others more than compensate for defects. A good work was done, and while the performers lived, it remained stable against assault. The publications here enumerated, in addition to those given in the Lloyd Catalogue, comprise the principal part of the Thomsonian, Botanic and Herbalist literature.

BOOKS AND PAMPHLETS.

Biggs, A. Botanico-Medical Text-Book. 1846.

Brown, Z. L. Lecture on the Principles of Medicine before the Thomsonian Botanico-Medical Society of the State of Michigan. 1846.

Colby, Benjamin. Guide to Health: Being an Exposition of the Principles, of the Thomsonian System of Practice and their Mode of Application in the Cure of Every Form of Disease. 1841.

Comfort, J. W. Thomsonian Practice of Medicine. Philadelphia. 1842.

Comfort, J. W. Comfort's Thomsonian Midwifery and Treatment of Complaints Peculiar to Females and Infants. Philadelphia. 1841.

Comins, I. M. Reformed Practice of Medicine, and History of Medicine. New York. 1845.

Cook, William H. Physio-Medical Dispensatory — A Distinctly Original Work on Therapeutics and Materia Medica. Cincinnati. 1872.

Cunningham, John. What is Thomsonism? Poughkeepsie, N. Y. 1845.

Curtis, Alva. Treatise on Midwifery. Cincinnati. 1840.

Curtis. Alva. Synopsis of Lectures on Medical Science. Cincinnati.

Curtis, Alva. Synopsis of Lectures on Obstetrics and the Diseases of Women and Children. Cincinnati.

Curtis, Alva. Fair Examination and Criticism of All the Medical Systems in Vogue. Cincinnati.

Curtis, Alva. Provocation and the Reply. A Review of Professor Wright's Hospital Address. Cincinnati.

Fonerden, William Henry. Lectures on the Botanic Practice of Medicine. Forsyth, Georgia.

Forenden, William Henry. Thomsonian Principles and Practice of Medico-Chirurgical Obstetrics. New York. 1846.

Friend, Joseph D. Plain Practical Treatise on Midwifery. New York. 1846.

Hersey, Thomas. Midwife's Practical Directory. Columbus, Ohio. 1834.

Johnson, Dr. Good Samaritan, or The Sick Man's Friend. Chester, Penn. 1841.

Kost, John. See Lloyd Catalogue.

Kost, John. Family Physician: The Practice of Medicine According to the Plan Most Approved by the Reformed or Botanic Colleges of the United States: Embracing a Treatise on Materia Medica and Pharmacy. Mount Vernon, Ohio. 1847.

Mattson, Morris. American Vegetable Practice. Boston. 1841.

Priest, N. L. Medical Companion. Exeter, N. H. 1838.

Price, Henry M. Reformed Medical Pharmacopœia. Petersburg, Va. 1841.

Sperry, Isaac G. Family Medical Adviser: Containing a Complete History of Disease with the Method and Mode of Cure. Hartford. 1848.

Thomson, Samuel. Guide to Health. 1820.

Worthy, A. N. and Henry Lee, (né Plummer.) Botanic Practice of Medicine. Forsyth, Georgia. 1842.

PERIODICALS.

The followiug are the titles of various periodical publications of the Botanic and Reformed Schools of Medicine in the United States. Beginning with the Botanico-Medical Recorder by Thomas Hersey and the Botanic Watchman by Dr. John Thomson, most of them belong to the period between 1830 and 1860.

1. Botanic Advocate. Vermont, 1842.
2. Botanic Luminary. Hartford, Connecticut. 1842.
3. Botanic Medical Reformer. Philadelphia. 1843.
4. Botanic Register. Marion, Alabama.
5. Botanic Sentinel. 1845.
6. Botanic Watchman. By John Thomson. Albany, N. Y. 1834-5.
7. Botanic's Friend, and Herald of Truth. Philadelphia. 1836.
8. Botanico-Medical Recorder. See No. XVIII of the Lloyd Catalogue.
9. Botanico-Medical Reformer. By John Kost. Mount Vernon, Ohio.
10. Fall River and Middleboro' Medical Inquirer. Massachusetts. 1846.
11. Georgia Botanic Journal. 1848.
12. Independent Botanic Advocate. Afterward the Botanic Advocate and Thomsonian Family Physician. By Doctors Wilson and Sperry. Connecticut. 1843.

13. Maine Thomsonian Recorder. By Benjamin Colby. 1859. Merged in the Thomsonian Medical Advertiser.
14. Medical Reformer and Temperance Advocate. By I. M. Comings. New York. 1853.
15. Medical Truth-Teller. By J. Gates. Rochester, New York. 1846.
16. New England Medical Eclectic and Guide to Health. By Calvin Newton. Worcester, Mass. 1846. The title was changed the next year to New England Botanic Medical and Surgical Journal, and again some years later as already explained. See Lloyd Catalogue No. LXVI.
17. Poughkeepsie Thomsonian. By Thomas Lapham. Poughkeepsie, N. Y. 1837. Some years later J. M. Lapham and John Cunningham became editors, and in November, 1845, Dr. Abiel Gardner succeeded. He transferred the establishment two years afterward to Dr. Aaron Bassett. At this period the medical conflict had been generally victorious, and the zeal for organization and Reform journals sensibly waned. Dr. Bassett discontinued the Thomsonian in 1848, turning the subscribers over to the New England Botanic Medical and Surgical Journal.
18. Rhode Island Medical Reformer. By B. Franklin Clark. Providence. 1843.
19. Southern Botanic Medical Journal. William Henry Fonerden. Forsyth, Georgia. 1846.
20. Southern Botanico-Medical Journal. By L. Bankston, Hugh Quin, T. J. Hand and others. Forsyth, Georgia. This journal was afterward removed with the college to Macon.
21. Southern Medical Reformer. By Henry M. Price.
22. Southwestern Medical Reformer. By William Byrd Powell. Memphis, Tennessee. 1846.

23. Thomsonian Advertiser. By James Osgood. Boston. 1844.
24. Thomsonian Defender. By William Spillman. Maryville, Tennessee. 1835.
25. Thomsonian Manual. William Alcott. Boston. This was the publication recognized as the organ of Dr. Samuel Thomson himself.
26. Thomsonian Medical and Physiological Journal. By Benjamin Colby. Boston. This periodical was merged in September, 1846, in the New England Medical Eclectic.
27. Thomsonian Medical Independent. Boston. 1845.
28. Thomsonian Messenger. By Joseph D. Friend. New Haven, Connecticut. 1845.
29. Thomsonian Recorder. By Thomas Hersey. Columbus, Ohio. 1832. Afterward the Botanico-Medical Recorder which was removed to Cincinnati and conducted in turn by Alva Curtis and William H. Cook.
30. Thomsonian Scout. Standish and J. W. Johnson. Hartford. 1841.
31. Thomsonian Sentinel. Philadelphia. 1841.
32. Thomsonian Spy.
33. True Thomsonian. Boston. 1843. Supporting the cause of Dr. Morris Mattson against Samuel Thomson.
34. Western Medical Truth-Teller and Physiological Journal. Hillsborough, Illinois. 1846.
35. Woonsocket Sentinel and Thomsonian Advocate. Woonsocket, R. I. 1842.

There were several other periodicals which were conducted with spirit and energy. The public mind was kept in agitation for years, and there was even a political organization contemplated. In one or two States there was an actual change of Governors effected by this issue, when as though by general consent the enactments establishing legal

disabilities in the case of dissident practitioners of medicine were abrogated. Almost spontaneously many of the periodicals suspended publication. As has often been the case with Reform movements, their great object having been accomplished, they ceased to exist.

NOTE.—The following belong to the publications of Eclectic physicians and were unavoidably omitted from their proper place in the catalogue :

Potter, George Edward. My Experience with the International Medical Congress. Johnstown, Penn. 1887. Pamphlet.

Taft, Simon P. Unlawful Interference of Legislation with the Rights of Physicians Newark, N. J. 1881. Pamphlet.

CHAPTER XVIII.

LATER DEVELOPMENTS IN SURGERY AND MEDICINE.

Sir James Y. Simpson, himself a protestant against the abuses of Old Surgery as well as Old Physic, made a prediction of an era when practitioners would look upon the cure of certain maladies as simply a series of chemical problems and formulas; melt down all calculi, necrosed bones, etc., chemically, and not remove them by surgical operations; stop bleeding in amputations and other wounds, not by septic ligatures or stupid needles, but by the simple application of hæmastatic gases or washes, and healing by the first intention, the few wounds required in Surgery.

This has not all been accomplished. Yet it must be acknowledged to the everlasting credit of the surgical art, especially in Europe, and we have still hope to be able to include America, that it has become more cautious and conservative than it has been of aforetime. There is greater courage in the undertaking of capital operations when these are regarded as necessary, and perhaps somewhat less of the reckless and wanton destroying of tissue or organs that are still capable of preservation. The surgeon respects the physiologic integrity of the organism, endeavoring as with a holy purpose to limit his procedures to the removing only of diseased parts that can not be restored, and the preserving of the healthy material.

There was, till a very recent period, great hesitation in regard to interfering with the brain. Trephining was chiefly

employed to remove bone that was pressing upon the soft tissue; whereas, it is now an incident in the operations for the treatment of all membranes. The Surgeon formerly would not meddle with the posterior part of the vertebral column. He now ventures upon such procedures with confidence.

Of the surgery of the thorax, Mr. Pearce Gould remarks, that not only the pleura, but the lung itself, is operated upon; and the chief bar to further pulmonary surgery is the difficulty of diagnosis and localisation of lung-diseases. The pericardium is aspirated or drained without hesitation; and the suggestion has been made, not only to tap the heart itself, but to treat wounds of the muscular structure by careful suture. The mediastinum, likewise, is now within the pale of legitimate surgery.

No single organ in the great cavity of the abdomen is now held to be beyond the reach of the surgeon's knife. The removal of large abdominal tumors is almost a commonplace occurrence, and all the viscera of the abdomen are now included in surgical procedures. Even the stomach has been invaded. Portions have been removed, and the patient survived; and in several instances the entire organ was amputated. The success thus far has not been gratifying; but if the operation is performed, and not only recovery takes place, but the digestive process continues normally, the theories of that function will require to be essentially modified.

Yet till very recently surgeons have considered that many organs and parts of the human body lay beyond the limits of legitimate surgical interposition, and admitted that it was no reproach to their art to refuse to interfere with the peritoneum, the kidney, the lungs or the brain. A surgical operation was thought to be in its very nature

lethal, and certain tissues and organs were believed to be of such anatomic delicacy that the submitting of them to operation was to court disaster. It is now known that simple surgical procedures when well executed are not in themselves pathogenic, and that every tissue and organ of the body is the seat of a power of repair superior to the demand which surgery makes. With this knowledge the anatomic barrier in the progress of surgery has disappeared. The only bar now recognized is its mechanical impossibility. The limit which is acknowledged is the physiological one. The medulla oblongata, for example, and the central portions of the brain, are outside of the field, not because they cannot be reached, nor on account of their peculiarity of structure, but because of their physiological importance. The surgeon considers whether he can operate upon a tissue or organ without injury to the structure necessary to life, or without inflicting upon the patient greater disabilities than those caused by the disease which he is called upon to combat.

A new conception of the real nature of surgical operation and the personal responsibility of the operator is beginning to be entertained. Instead of brilliancy of execution, we now demand actual success. When a patient succumbs to shock or other fatal agency, the operation is practically a failure, however it may be accounted technically. These heroic achievements which are often described in glowing terms in public newspapers, and in professional journals and gatherings, may often be justly condemned in the language of the French officer, slightly modified: "C' est magnifique; mais c'est non chirurgie" — magnificent as a performance, but by no means a genuine surgical achievement. When operations fail of their proper purpose, the operator is to be regarded as the one responsible; we may not at-

tribute anything of the cause of failure to Divine Providence.

The highest ideal of Surgery is now apprehended to be the treating directly of the causes of disease. Surgical methods, heretofore, have been crude and unphilosophic. They consisted almost entirely of the removing of pathologic products, as by amputation, the relief of tension, and the application of surgical rest — but of little else beyond these. The surgeon now directs his efforts not only to the removing of the effects or products of disease, but not of the active cause. There is ground for hope, therefore, as there is reason to desire ardently, that with superior enlightenment there will also be a higher conscientiousness; and accordingly, that there will be a ceasing to amputate and mutilate in case of accident or disease, till the procedure shall be known to be absolutely necessary and other means morally certain to fail. An unnecessary surgical operation is clearly allied to actual crime, and the faithful and upright surgeon will be careful, and even punctilious, to avoid its performing.

DENTISTRY.

Within the Nineteenth Century the art of Dentistry has grown to the dignity of a learned profession. Like the other departments of Operative Surgery, it had been previously consigned to the barbers and others, whose principal skill consisted in the removing of diseased teeth.. Yet this art seems to have been not only very ancient, but to have been at one time included in the calling of the physician. One distinguished teacher and practitioner placed a model of his instruments in an Ionian temple-hospital. The art of replacing lost teeth appears also to have been of great antiquity. Artificial teeth have been found in the mouths of the mummied human bodies in Egypt, and it is said that

the two famous Roman Imperators, Julius Cæsar and Antony, were thus equipped.

During the Eighteenth Century there were individuals in the various countries of Europe who made it their business to insert teeth in place of those that had been extracted. These were generally made from ivory, but some were taken from the mouths of other persons.*

The first dentist in America was Mr. John Woofendale. He plied his art in Philadelphia and New York in 1766, but soon afterward returned to England. The next was Mr. Joseph LeMaine, who came to the United States with the French army in the Revolutionary war. Afterward Mr. Isaac Greenwood engaged in the business in Boston; and in 1788, his son began the practice of dentistry in New York. He constructed an entire denture for General Washington, which was greatly admired. It was not long, however, in displaying many imperfections, changing the expression of the countenance, obstructing speech, and otherwise giving annoyance; and finally they were laid aside.

For many years the art of dentistry was carried on in America by practitioners from Europe. In 1820 there were hardly more than a hundred in the country; in ten years there were three times that number; and in 1840 more than twelve hundred Americans had adopted the profession, advancing it to the highest degree of development yet known. It is, nevertheless, an unfortunate fact not to be disguised, that in the United States the teeth very frequently become diseased at an early period in life, and require careful

* An individual from Scotland accompanied the British army in the Peninsular war against Napoleon for the purpose of procuring teeth from the mouths of the soldiers who fell in battle. He supplied himself in this way with many thousands, and afterward obtained a large amount of money by selling them to dental doctors. The fact, however, came to public knowledge, and his house in Edinburgh was destroyed by an infuriated mob, while he himself was compelled to fly for his life.

attention to arrest their destruction.* This was formerly traced to the practice of medication by mercury, which has been general and is yet adhered to by many physicians, but there has been no reform that has brought an adequate remedy. The illnesses of infancy and early childhood, especially those of an eruptive and inflammatory character, impair the health and vitality of the teeth. The fever ensuing from vaccination has the same influence An expert dentist can, by an examining of the mouth, tell with great accuracy the period of these early sicknesses.

Invention, however, has been active, both for the preserving of the natural teeth and for the replacing of them skilfully and acceptably; and as a result the fame of American dentists surpasses the reputation of their professional brethren of the other hemisphere. Indeed, till the Utopian ideal shall have been realized, and the way of recovering lost conditions shall have become widely known and followed, the calling of dentistry bids fair to hold its field triumphantly in all countries. The "broken tooth," as well as the "foot out of joint," is a fair illustration of the misfortune of confiding in unfaithful persons.

The proclivity of mediocre practitioners of the art to secure protection for themselves against competitors by special legislation and a system of licensing by Examining Boards, is still rife in many of the States of the American Union. There is also a special examination required in England, in connection with the Royal College of Surgeons, and a curriculum of study has been arranged. Candidates who attend there are admitted to examination, and if approved, receive a certificate which authorizes them to prac-

* Lord Byron in one of his letters remarked that it is necessary to consult a dentist at least every year. This indicates a similar state of affairs in England. In a former century, in the reign of Queen Elizabeth, black and diseased teeth were common among the courtiers and gentry.

tice as dentists. In Scotland, diseases of the teeth and surrounding structures are subjects of lecture and examination at the universities, but no special or partial diploma is given. In the United States there are Colleges of Dentistry in several of the principal cities, with a curriculum including every branch of knowledge that is regarded as pertaining to the art, but omitting much that relates to General Anatomy, Pathology or Therapeutics. Diplomas are conferred accordingly. The right to practice, however, is more or less controlled in many of the States by the special legislation.

OTHER FORMS OF THERAPY.

Besides the three Schools of Medicine now distinctly acknowledged by the legislation of the majority of the States, there are several others preferring claims to popular favor. The doctrines of Samuel Thomson, or more correctly, of the Physio-Medical School, are still entertained by several thousand physicians, and are represented in two medical colleges, several State Societies, three or more Medical Examining Boards, and a National Physio-Medical Association. Any persecution of them after the manner of the former years of the Nineteenth Century, would be likely to enkindle anew the fires which at that period so completely burned away the barriers which had been so assiduously constructed and strenuously maintained against Medical Freedom. Indeed, a revival of that School in its former force and aggressiveness, is predicted.

The mode of Therapeutics, known in Europe as Dosimetry, has been introduced into this country and received with favor by many physicians of the different Schools of Practice. Its peculiar features are set forth in a work entitled "*American Alkalometry*," recently published at Chicago by Doctors Abbott and Waugh. The professed aim is set

forth as "accuracy in Therapeutics with clinical applications." It is described by its advocates as "an idea, not a system," and it is characterized by the chrono-thermal methods and minute dosage.

Colleges of Hygiene for the instructing of students have been established at St. Louis, Cincinnati, and other places, beginning their career with encouraging prospects. The founder at St. Louis was Miss Susanna W. Dodds, a physician of merit and intelligence, abundantly capable of bringing her views into successful realization. The courses of study included the branches of knowledge usually taught in medical colleges, together with Hygiene, Sanitary Engineering and Physical Culture. But the professional hostility encountered, and the general indifference stood in the way of success, and most of these institutions now confine their operations to professional service.

OSTEOPATHY.

Another enterprise of analogous character is the "American School of Osteopathy." The founder, Dr. Andrew V. Still, was a surgeon in the Federal Army during the war between the Northern and Southern States. He had become disappointed in the use of the various medicines, from observing that they were uncertain in their action, and that they were followed by different effects at different times. After the return of peace he made his home in a frontier town of Kansas, where he might prosecute his investigations and elaborate the conclusions. Afterward, in 1885, he removed to Kirksville in Missouri, where he began the practice of his new method, and established a School for the promulgating of his doctrines.

Osteopathy appears to be a form of the "Swedish Movement Cure," assuming, however, to be a distinct branch of the Healing Art. It dispenses entirely with the administer-

ing of medicines. The theory represents the human body as an ensouled mechanism which is not to be improved by any art or invention. It considers the cause of a large proportion of diseases to be occasioned from a deficiency in the supply of blood. It aims, accordingly, to remedy this condition by a proper course of manual therapeutics, securing thereby to the recipient the greatest physical activity, and at the same time assuring to the nervous system complete rest. The organism, it is insisted, can be treated by a skilful operator, and the various structures and functions regulated by judicious manipulation much better than by drugs. For example, in cases where a cathartic medicine is usually administered, it is considered to be only necessary to open the gall-duct by this means, and that better results will be thereby obtained. Nervous troubles and paralytic affections, it is affirmed, will yield readily to this mode of treatment; and a satisfactory cure is likewise held to view for asthma, bronchitis, cancer, consumption, diphtheritis, epilepsy, female complaints, goitre, spinal meningitis, ophthalmic affections, renal disease, hip-disease, heart-disease, spinal disease, fever and other disorders. The treatment is begun with a procedure called *desensitizing*, and this is followed by manipulations.

"The American School of Osteopathy" at Kirksville, though not formally recognized as scientific according to the denominational sense in which that term is often employed, is described as having a curriculum of study sufficiently thorough to enable the pupils to become proficient.* There

* There are the usual appointments and facilities, such as a dissecting room, lecture hall, recitation-rooms, study-rooms, operating rooms and offices. The department which receives the most attention is Anatomy; and it is stated that there are bestowed upon it time and attention many times over that are given to it in other institutions. It is considered necessary to know minutely every organ and constituent part of the corporeal organism. The instruction next to this is clinical, and consists entirely in lessons and demonstrations of Osteopathy. Classes were graduated in 1891 and succeeding years.

are also Colleges of Osteopathy in Chicago, Milwaukee and other places, in which instruction is given in the various departments of anatomic and physiological study, and other knowledge pertaining to the peculiar theory and practice.

The usual attempts have been made to bring Dr. Still and practitioners of Osteopathy to account under the various medical enactments in Missouri, Kentucky and other States, but the prosecutions resulted in acquittals. In several States the practitioners have obtained a statutory recognition, but in others, the purpose to suppress the various schools of "healers" by exemplary legislation, includes Osteopathists with the others.*

Endo-Therapy or the "Drugless Science" of which Dr. W. W. Fulkerson of Kirksville, Missouri, is said to be the original promulgator, appears at first sight to be closely akin to Osteopathy, if it is not actually an offshoot. It is explained as pertaining to treatment arising from internal causes, and it purports to include the curative treatment of the interior structures of the body and the healing of disease by rallying the internal vital fluids and forces to the per-

* During the winter of 1901 bills were introduced in no less than twenty of the Legislatures of the States to subject the practitioners of clairvoyant healing, Christian Science, Mental Therapy, etc., to the jurisdiction of the Medical Examining Boards. In several of these, those practicing Osteopathy were included. The results are not yet certain. In North Dakota the Senate emasculated the medical bill of its contemplated objects by an amendment exempting practitioners of these several Schools from its provisions. A bill directed against the Osteopathists having passed the Legislature of the State of Washington, Governor Rogers returned it on the 15th of February with a message containing a severe rebuke.

"It is undeniably true," said he, "that the Practice of Medicine and the art of healing have advanced only by the innovations of those who were looked upon with extremest disfavor by members of the regular Schools. Truth is mighty and will prevail. God forbid that we of Washington should attempt to stay its progress. * * *

"In our day physicians of the bluest blood and the highest attainments are guilty of poisoning the springs of life. The contents of the drug store are perhaps more dangerous to the well-being of the race than those of the saloon. Dope fiends are thus created by the thousand. Morphine powders administered to parents bring forth their natural fruit even to the third and fourth generation of descendants."

The degenerates thus created, the Governor declares, form an ever-increasing army, and threaten by their weakness and criminality, the very existence of civilization itself.

"If," he adds, "if the Osteopaths can show us a better way, and deliver us even in the smallest degree from enormous admitted and increasing evils, let us not deny them the poor honor of the title of Teacher or Doctor."

formance of their natural functions — thus constituting "a scientific system of healing without the assistance of drugs." The treatment itself is described as consisting of "kinetics, or movements and manipulations administered by a skilful operator, who has a scientific knowledge of the anatomical construction of the human body, and by one thoroughly conversant with the nature of disease."

The "Chiropractic" or hand-practice is described as "a new Science of healing discovered by Dr. Palmer" of Davenport, Iowa. It has hardly attained the dimensions of a distinct School, having been in existence for only a few years; nevertheless, there are students of the method and a definite course of instruction. The "underlying philosophy" is explained as being the same as that of Osteopathy, with a wider range of possibilities for both operator and patient — the Chiropractic using only one specific "movement" for each disease, while the Osteopath employs many. The various other methods and systems are repudiated which have had dominion from earliest history till the present time — from astrology and necromancy, down to the whole array of drugs and knives. The cause of disease, Dr. Palmer declares, is a mechanical obstruction of the natural functions. "The human mechanic can remove and adjust that cause by his knowledge of Anatomy and a highly-cultured sense of touch,"— doing with the hands what the medical men aim to do with drugs and the knife.

Medical legislation calls forth a forcible utterance. "People have been made to believe," says Dr. Palmer, "that medical laws were made for the 'protection of the public against quacks.' But the facts are that these laws are usually framed by professional quacks for their own protection." Being reviled, the Doctor should not revile again, but commit his cause to the one who judges righteously.

The term "quack" is vulgar slang, such as no well-bred individual ever employs, or cares to employ. The true professional man is a gentleman in speech as well as in deportment.

AMERICAN ASSOCIATION OF PHYSICIANS AND SURGEONS.

In October 1894 a meeting of physicians was held in the city of Indianapolis, and an Association formed by the name of "the American Association of Physicians and Surgeons." The original members were principally from the State of Indiana, but there were accessions soon afterward from other parts of the United States. The first annual meeting was held in Indianapolis on the 14th day of January, 1895, at which Dr. C. Edson Covey of Michigan was elected president, and Dr. Russell C. Kelsey of Indianapolis, secretary, with a vice-president from each of the States represented in the Association. The next annual meeting was held at Indianapolis in 1896, and awakened much general interest. Electro-therapeutics, Abdominal Surgery and Vaccination were allotted to Sections, and elicited a full discussion. Hygiene, Preventive Medicine, Practice, and several subjects of a more novel character, were also presented by their advocates. The Association is undenominational, and the members had been identified with the different Schools, as orthodox, Homœopathist, Eclectic, Physio-Medical, Hygienic, Hydro-Therapeutic, Electro-Therapic, etc., and the different views which had been entertained were vigorously set forth. The Association met at Buffalo in the summer of 1897. It has held meetings since that time in other parts of the Northwest.

The American Medical College at Indianapolis is under the auspices of this Association. It was organized in 1894, with a force of thirty professors, and has graduated several

classes. In it all Schools are united and students elect to take either or all the courses: "Regular, Homœopathic, Eclectic or Physio-Medical."

IN CONCLUSION.

We sometimes hear it pleaded that in the Healing Art there should be no parties, no separate organizations. Mankind have a common interest in health and in the means to preserve it. This pleading is plausible, and perfectly consistent with that charity that seeketh not its own advantage, but the welfare of others. But in the human constitution, as in every department of Nature, there is a principle of polarity, and an impulse to differentiation. One class of human beings hold fast, sometimes almost convulsively, to what has been long esteemed and venerated; while another is ready, and frequently even eager, to discover what is new, and to bring it into possession. In a state of savagery there may be little distinction in art, but in the civilized state there is certain to be differencing of effort in every direction. It is in the plurality of faculties, in the variety of aspirations, the infinite extending of conceptions, that man is developed and perfected.

In the Art of Healing there is, accordingly a multiplicity of methods to be brought into view, and with each of them must come the modifying and even the discarding of older notions and procedures. With the bringing of them into contiguity, there is very certain to follow collision, degenerating into strife. Personal ambition and selfish motive are likely to transcend philanthropy and love of truth. There has been in every country and every historic period an official Medical Practice, taking its sanctions and theories from enforced authority. It boastfully claimed to be ample for its purpose, and was characterized by jealousy and in-

tolerance of innovation. From the Shaman of the Siberian village to the pretentious stickler for scientific regularity this has been the case. As in former religious crusades and persecutions, the arm of the Civil Power has been invoked and employed without scruple to arrest changes by the punishment of innovators. The record of history in this respect in both hemispheres has been far otherwise than humane or honorable. In every new period there have been demonstrated the shortcomings of its predecessor, and instead of truth-loving candor, there have been encountered derision, social proscription, persecution and even virtual outlawry.

In Europe the disciples of Hahnemann, and in America the associates and followers of Beach and Thomson, breasted alike the torrents of calumny and proscription. The Homœopathists who bravely adhered to their convictions, opened a New World, like Columbus, to subsequent explorers and colonizers. Eclectic Medicine in America, was likewise characterized by a career of vigorous protest and earnest endeavor. It was an enthusiasm not to be measured by common understanding. Its champions labored to develop a practice of Medicine, not cosseted and fenced about by special legislation, but having its foundations planted upon its intrinsic usefulness, without factitious privileges, always open to new light, and still retaining tenaciously the principles to which it owes its inception and continued existence.

There is vastly more to be learned than has been known. No one has a commission to set up a standard, to cast a measuring-line and say to the explorer: "Thus far shalt thou go, and no farther." We may account nothing common or unclean. It is the unalienable right of every one to do without arbitrary restriction the work which is appro-

priate to him, for which he has fitness and aptitude. For as every star has a glory of its own which we may not decry, so human beings have their genius and vocation which to crush or to cramp is murderous. Nor may we in order to give the stars superior distinctness, endeavor to extinguish or eclipse the sun. Enough for the glow-worm that shines in the dark to hate the brilliant orb of day; the true soul will esteem them both for what they are, and will admire the light of each. Every age teems with new convictions. The latest knowledge gives us freshest thought and inspiration.

The words of Augustin of Hippo are replete with the best sense: "In the things which are necessary let there be unity; in those not absolutely certain let there be liberty, and in them all let there be charity." That is not genuine Science where these are not. The divine Art of healing has but a single ethic: to live in charity, doing to others as we desire them to do to us, and to all as we have opportunity All else is factitious and extraneous. This implies knowledge, purpose and skill akin to intuition.

This is the Higher Law of Medicine!

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[As most of the individuals here named who belong to the modern period, had the rank and title of "Doctor," the designation is generally omitted.]

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