

CONCERNING THE AMERICAN MATERIA MEDICA*

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The course of the American materia medica has been tortuous. In an historical sense its beginnings are all-important, and must neither be evaded nor neglected by me, even though, by reason of the time consumed in its telling, that which most I crave to say be left unsaid. I do not know that any one has ever before attempted to construct an orderly sequence of its story, nor do I know that any man has ventured, in a spirit of fairness, toleration, and admiration, to say a kind word for both friend and foe involved in the mazes of past prejudice and past action, in which so innocent a theme as the American materia medica served as a text.

In 1808, in Boston, appeared the first Pharmacopoeia of American physicians. Published in Philadelphia (1778), it was the first Pharmacopoeia published authoritatively in America, under the auspices of the government of the United States. It emanated from Lancaster, almost a suburb of this city, and bore the official stamp of the embryonic nation. Could there have been a more precious book than this, issued in behalf of the struggling government? Since the publication of the epoch-marking book, a volume would be required were I even to attempt to record the titles or make a brief summary of the Philadelphia publications of world-wide celebrity on our subject.

As I think of those times and the records of the men who accomplished their mighty work in and about Philadelphia, the names of the participants that crush upon me stand second in importance to none in America. From this point the botanists Pursh and Nuttall pursued their explorations, and we all know the importance of their contributions to the study of the flora of North America. Here Dr. John Morgan became conspicuous, in that he was the first American physician to plead for the separation of the compounding of medicines from the process of medication, which, to use the words of the late Mr. Wilbert, he felt would be "commended in some directions, severely criticized in others."

In Philadelphia, about 1730, John Bartram established the first American botanical garden, and near here his cousin, Humphrey Marshall (1773), established the second. From the Jersey land near this point, Peter Smith began (1780) his travels down into and then through the southern country, thence back to Cincinnati, where (1812), under the title "Dispensatory," he printed the first medical book issued west of the Alleghenies. Need I call to your attention the two Bartons of one hundred years ago, and the work they accomplished, that of B. S. Barton (1798) being the first American attempt at a printed collection of the American materia medica, for that of Schoepf (1787) was issued in I love to think of him as a professor in Transylvania university of Lexington, Ky., then the western center of art, literature, and science, a collaborer with Audubon the bird painter of Louisville, Ky. To Philadelphia came that conspicuous searcher into America's materia medica, that antagonist to all forms of medication established "*by right of authority*," ~ Samuel Thomson to discuss with Rush, Cutler, and Barton those things pertaining to medicine in his day. Here, under the auspices of the University of Pennsylvania and the Philadelphia medical societies, such researches were made as those of Downey, on sanguinaria (1803), and many other theses of like importance. Indeed, notwithstanding lost opportunities, the influence of the three great institutions, the University of Pennsylvania, Jefferson Medical College, and the Philadelphia College of Pharmacy, in such as this is world wide. Wherever in this land one touches life and activity in the direction of botany, pharmacy, medicine, materia medica, and allied subjects there flow their united currents.

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To mention even briefly the records of the men no more among us, who come to mind as I review the work done. would take more space than can be devoted to the subject concerning which I write. I must not attempt to name men now living, nor yet can I presume to pass the more recent but not less important efforts of such men as Wood, Bache, Procter, Maisch, Trimble, Parrish, and others. Nor can I neglect those concerned in establishing the great chemical industries, Rosegarten, Powers, Weightman, Ellis, Bullock, Crenshaw, Carter, Scattergood, Bowers, and others. These, and such as these, have been mighty factors in our work, their names are inseparable from those of whom I write and are inseparably connected with American progress.

Early Conditions in Medicine.-Let us now revert to conditions pertaining to the day of those involved in the introduction of the early vegetable American materia medica. In those days, primitive men (and this term need not be restricted to the aborigines) were much closer to nature than is humanity at present. In addition to nature's contact, religious thought, or perhaps we may better say theological teachings. were more nearly hand in hand with man's opinions of life's objects than they are at present. Less disposed than now were men to question (aloud) the axiom (dogma) that the universe and all contained therein was fanned for the sole purpose either of serving or of pestering mankind. Diseases were likewise more apt to be likened to organic entities, partaking much of the qualities of the self-conscious devils of old that. under the auspices of an allwise Creator, delighted in torturing mankind. Seemingly, but yet as a rule without defining or perhaps comprehending the subject in these words, disease was not considered as simply a departure from the normal. but as an invading entity that must be driven out by an antagonist more powerful but yet somewhat more friendly to the suffering person. Nor is this opinion of diseases altogether a thing of the past, nor are the aforementioned conceptions of primitive men wanting in some men of our day as regards precepts and concepts. The medicine-man of the Indians was not alone in the belief in evil spirits or in devils that afflicted people with diseases that needs be conjured and potioned out. Nor is he yet deserted. Let us not be surprised that at that date the trend of thought of many and the personal belief of not a few was to the effect that, in nature's storehouse, ready for the use of man, were locked remedial agents antagonistic to every disease which sin-laden man had contracted or inherited. It was an oft-repeated maxim, that yet lingers. that God had placed in every country remedial agents to care for diseased mankind in that country. Nor is this, as already indicated, foreign to the belief of some today.

Let it not be accepted, however, that all men at that date were imbued with or even tintured by this theological inheritance or professional conception. On the contrary, many talented investigators of what was known then as materia medica looked upon disease, as well as upon remedial agents, in quite a different manner. They believed, it is true. that nature possessed secret wealths that could be utilized by man for man's benefit (often through torture of the flesh), but which, yet were no more *created* for man than that man was created for the purpose of being attacked by diseases or persecuted by evil spirits.

Thus came into play in the incipency of the early American materia medica a blending of the intensely religious, the professionally dogmatic, and the hopefully scientific, as well as the ever-present commercially ambitious. all seeking alike the secrets that reposed in the natural products of the new world.

And yet another vital factor in the primitive development of the American materia medica must not be overlooked. In those days, authoritative remedial agents of European pharmacy were difficult to obtain. This necessitated the discovery of agents that would parallel the action of the old-time remedies. Emetics, cathartics, vesicants, anthelmintics, and such were seemingly as neces How are we to know what plants are most proper for the purposes of medicine, until we shall have examined the properties of a great body of vegetables?

Then comes a plea for toleration by his professional brethren:

I wish to turn the attention of our physicians to an investigation of the properties of their native productions. When it is considered how little has hitherto been done in this way, every attempt (mine is an humble one) should be candidly received.

Next, in a cautious criticism, he applies himself directly to physicians, informing them that little had been done in the direction of the investigation of the American materia medica. Skim now the substances suggested by Barton as being worthy of examination and their sources. Note that he credits alike Indian, pioneer, traveller, botanist, farmer, attorney, and statesman, mentioning Thomas Jefferson, then President of the United States, as commending a treatment to overcome a disease then prevalent in Virginia. But seldom does he credit a member of the medical profession as having done anything whatever! Note more specifically the importance given to energetic drugs, both those experimented with and those that were promising by reason of their relationship, botanically, to poisonous remedies in use. A few are kindly in their action, as, for example, *comus florida*, *boneset*, and *uva ursi*, the *majority*, however, being possessed either of exceedingly disagreeable qualities or of very energetic natures, such as emetics, cathartics, anthelmintics, vesicants, or bitter tonics. Thus Barton indicates his self-satisfaction with, or at least his subjection to the heroic theory. In a lengthy article on *phytolacca* he commends its investigation because "it is certainly a plant of great activity." The fact that *Rhus radicans* produces such a terrible eruption as is the case with some people is most clearly stated by the doctor, after which he indicates where and how the decoction or the plant in substance can be used *safely*, with benefit in disease. As previously indicated, the trend of thought in those days in the medical profession was to discover substances that in action would parallel European energetic drugs. Senega is thus hopefully mentioned by Barton, as follows:

My ingenious pupil, Dr. Thomas Walmsley, has lately communicated to me an additional instance of the *salivating* power of this active vegetable.

He questions the *power* of *datura* in overcoming so virulent a disease as tetanus, as follows:

I fear that our vegetable, though by no means a *feeble* one, will be found unequal to the cure of this terrible disease.

In this sentence he unconsciously voices the transplanted idea of mediaeval medicine, to the effect that *severe diseases* require *heroic treatment*.²

Among emetics, sanguinaria is conspicuous. The doctor believes by reason of the *acrid nature* of the *Indian turnip*, that it deserves careful investigation concerning its *promising therapeutical qualities*.

Among stimulants, the poisonous side of plants is the subject of hopefulness. For example:

I have no hesitation in referring to a number of poisonous vegetables, with the properties of which we are not so well acquainted as we ought to be. Such are the *Datura Stramonium*, or Jamestown weed, the *Cicuta maculata*, etc.

Concerning *Cicuta venenosa*, a fearful poison which kills as he states, "without inducing pain or convulsion," he adds that perhaps it is "the plant with which some of our Indians destroy themselves." He adds that it should be used with great care, concluding as follows:

I have given the powder of this plant internally in a case of fever, and have thus, at least, ascertained that it may be used with safety.

Happily, among stimulants are included a few innocuous plants, gaultheria, sassafras, spicewood, ginseng, and eryngium.

² Let it not be forgotten that the European herbalists were not poisoners. They perhaps erred in the direction of credence in innocuous plants of no established value.

Not less energetic are the *topical stimulants*, among which, in addition to the acrid crowfoot, the cathartic butternut and a few other items are included as follows:

To this head of topical stimulants, I may refer several species of the genus *Rhus*, or *Sumac*; particularly the *Rhus radicans*, or poison vine; the *Rhus vernix*, or Vernice tree; and the *Rhus toxicodendron*, or poison oak.

But enough for our purpose. Throughout the "Collection" we note, as has been stated, that remedial agents thought of as members of the American materia medica, and used both by the "empiricists" and the profession, partake of energetic natures or of strikingly disagreeable qualities. Consider now the significance of what we have before us in a general application to the American materia medica. Dr. Barton was a cultured, kindly gentleman, and one of the foremost thinkers of his time. He was conspicuous as a botanist and was therefore acquainted with America's flora, being likewise hand in hand with men versed in therapy and chemistry. He was an educated man, tolerant of error and mistakes, kindly disposed towards empiricists and those engaged in domestic medication, a listener to men with information or experience records to impart, whether or not they were qualified in outside lines. He was in touch with the pioneer and the Indian, as well as adventurers who travelled in outside places, and he came into close communication with primitive men and with nature. Notwithstanding all this, we find that the "Materia Medica Americana" of Dr. Barton, known as Barton's "Collection," breathes in its every page the touch that seems to have been inherited from the spirit of mediaeval European times, in which kindness to the sick and charity for the afflicted were too often exceptional. Confronting evil spirits, although not designated as devils, seemingly needed to be expelled by energetic, harsh forms of medication.

PART II

Beginning of a Revolution.-Comes now the spirit of unrest, that, cradled during preceding years, about this date took possession of the people. There were questionings and criticisms of "authority" in medicine, that success in the great American Rebellion had perhaps made possible. Inherited methods from abroad, political or religious, were no longer accepted merely by right of inheritance or of official authority. Rebellion in politics and by arms bred rebellion in expanding thought. Inherited medicines and authoritative medication as practiced by physicians became a storm-centre of attack. European text-books, European remedies, European processes, surgical, therapeutical, pharmaceutical, came by a great part of the people to be viewed with suspicion. The rebellious populace, often illiterate and destitute of scientific education, presumed to criticize the methods as well as the practice of the medical profession. The terms *bleeders*, *blisterers*, and "*fashionable doctors*" were hurled against physicians of regular professional education. Empiricists, believing in domestic medication and the possibilities thereof, in contradistinction to regular medication, issued pamphlets, wrote communications to the papers, travelled about the country giving lectures and otherwise decrying the evils of the processes inherited from Europe and paralleled in America. "Better that our loved ones should be permitted to die in peace than by the torturer's hand." That cry became a battle cry.

Samuel Thomson, the Botanic Crusader.-Just then came Samuel Thomson as the most pronounced of all the agitators. Dogmatic, aggressive, unflinchingly persistent, closely did he touch the people and irresistibly did he appeal to them. Throughout the country his followers and himself travelled, introducing the new "American" practice and arraiging those whom they called "fashionable doctors." The evils of bleeding, the depleting effects of violent cathartics, of blistering and of salivating were most forcibly and excoriatingly set forth. Nor could they well be exaggerated. Thomsonianism (better had it been *Thomsonism*) became a household word. Empiricism as concerns medication became the fashion with thousands. Household remedies now grew in importance, whilst home-prepared remedies were most extravagantly praised. In it all the educated physician was berated and abused without stint and without mercy.

The good in his work was forgotten, the bad (and there was much bad) was never overlooked. Seizing upon the nature of the heroic remedies that were favorites Thomson and his people raised the battle cry against such methods and against such remedies. For reasons that are apparent as we look back into those days they instituted a crusade that finally succeeded. Notwithstanding the illiteracy of so many of its advocates, the rebellion against the regular profession spread like a prairie fire. The fame of Thomson and the Thomsonian remedies became established in the homes of the people throughout America, from Massachusetts to the Carolinas.

The Lobelia Epoch.-One of the main tenets of the Thomsonians was the employment of no poisonous remedies. They aimed to exclude all mineral substances, as well as every vegetable substance that could produce death or that could be reckoned among those antagonistic to life processes. Thus the list of remedies used by Thomson omitted even such drugs as sanguinaria, or veratrum, or gelsemium.

Comes now the irony of fate! The sheet anchor of the Thomsonians was lobelia. A *lobelia course* was preliminary, in most instances, to any other form of treatment whatsoever. A vital blow was now struck by the antagonists of Thomson. *Lobelia was by them thrown into the list of poisons!* Many were the deaths reported as resulting from the heroic medication of the Thomsonians in which lobelia was shown (or asserted) to have been the chief offender. Came at last the arrest, prosecution (or as some prefer *persecution*), and trial of Thomson, and next the famous trial of Dr. Frost. This persecution, as the Thomsonians accepted it to be, did not dismay Thomson's votaries or discourage their leader. On the contrary, it led to the more pronounced arraying of the forces of Thomson against the legalized medical profession. Thomson became a martyr in the eyes of thousands of adherents from Massachusetts to the Carolinas. A mighty rebellion had been bred among the people, having as its centre Thomson and his system of medication, its object being the extermination of the "fashionable methods" of treating disease by what was accepted as death-dealing processes imported from Europe. It was a second American Revolution, that marshalled in its ranks, as insurgents, a far greater army than had marched under the flag of Washington, an army made up of those who fought in the other Revolution as well as their descendants. The prison cell of Thomson and the prosecution of Dr. Frost became living watchwords and mighty battle cries. Forgotten was the good of established therapy. Overlooked were the sacrifices as well as the kindnesses of physicians engaged in orthodox medication. All who practiced by authority were thrown into one group, and that group received the titles already mentioned, "bleeders," "blisterers," "salivaters," and even "murderers!" Most excruciatingly did they picture the process of salivation by the mercurials, the depleting effect of cantharides blister. the exhaustion of those bled of their life blood, the terrible suffering of those to whom were applied the horrible tartar emetic plaster. In every family was an object lesson. Through it all, such men as Barton, Dunglison, Zollickoffer, Tully, and others pursued the even tenor of their way, seemingly unaffected, But yet the influence of Thomsonianism was fast undermining orthodox heroic medication. It is questionable, as this speaker looks back at those days and events, whether any other process or mode of action could have accomplished that which followed the methods of the revolutionists, although many believe that, had plain discussions in a balanced way been employed by the members of the schools of medicine, the cruel features of such medication as then prevailed would sooner have disappeared. Be this as it may, the regular medical profession generally, conceding nothing, arrayed itself against the outsiders. It protected the theory and maintained the practice based on the application of the heroic in medication.

The Cruelties of Thomsonianism.-But the Thomsonian revolutionists were at a disadvantage not alone in the direction of the unquestioned energy of lobelia. Accompanying methods that they advocated partook of much that would, today, be called barbarism. Their large doses of compounds containing capsicum and myrrh were excruciatingly severe. Their sweating process, repeatedly applied to the same patient, was debilitating. Their "composition draughts" were almost unbearable, as this writer knows from experience. These, combined with other features of a course of

Thomsonian medication, seem to have been dreaded by many of the afflicted almost as much as were the blistering, bleeding, and salivating processes of Thomson's antagonists, although the after-consequences were surely not as necessarily lasting or as fatal. Thomson has unquestionably combined the sweating methods of the aborigines of America with the emetic processes prevalent in "fashionable" medication, complicated with which was the burning as by fire of irritating materials like capsicum and bayberry. Taken altogether, the people, in escaping from one form of torture, had become involved, although to a lesser degree. in another. A *little* devil had replaced a bigger one. Then, too, it must be remembered that in the regular profession an educated man possessed of more or less misapplied learning usually conducted the ordeal test, while in the other case whoever could read or could comprehend the processes promulgated in Thomson's patent was considered fully qualified to treat disease. The one was scientifically or professionally cruel, the other cruelly unscientific and unprofessional. Helpless were the sick in the hands of either or both. Again a spirit of unrest came upon the people. Was it necessary that the step of the man of medicine should make the afflicted shudder? From him children ran in affright. Did the treatment of disease demand this?

Wooster Beach, the "Father of Eclecticism."-Just at this point came WV ooster Beach (1833). Unlike Thomson he was an educated man. Like Thomson he was a revolutionist. Unlike Thomson he was a believer in colleges and in education. Like Thomson he had great faith in America's *materia medica*. A graduate of the medical department of the University of New York, his first publication, "The American Practice of Medicine," published in three volumes in New York in 1833, was rebelliously addressed to the people and not limited to the profession of medicine. Thus, although believing in college education, he defied the legalized practitioners, in that his publication, concerning medicine, was presented to a non-professional audience. Thus, Wooster Beach antagonized both sections we have been considering. It was at once seen that he had invaded the field of Thomson, but not in any wise as his disciple, and that he had also irrevocably violated the ethics as well as the dogmas of the dominant school. The Thomsons turned upon Beach and his followers, abusing them even more viciously than they did their old enemies, the "bleeders." The regulars raised their battleaxes. Between the two stood Dr. Wooster Beach, the prey of both. We have seen Thomson to be a man of indomitable will, determined and fearless and most fertile in resources, though illiterate. Let us now consider his rival.

Dr. Wooster Beach was conversant with the literature of the past. Barton's "Collections," Rafinesque's "*Materia Medica Americana*," Schoepf's "*Materia Medica*," the writings of Dunglison, Tully, and Zollickoffer, the *Pharmacopoeias* of the United States of 1820 and 1830, the Proceedings of the different medical societies. these and such as these were to him familiar. With the ideal of reform but with high regard for others' efforts, he unhesitatingly selected from all these sources that which he considered best, his object being the kindly treatment of disease and a replacing of powerful remedies by those less energetic, whenever such were capable of serving equally as well. He believed in a reduction of energetic doses to such an extent that poisonous drugs. if used, should produce no toxic or harmful effect. and in the modifying of compounds in which poisons took a part, so that if the disease was not cured no dominating constituents should thereby cause fatal results. The motto adopted by Beach and his followers, "*Vires Vitales Sustinete*" (Sustain the Vital Forces), made it necessary that these objects should be accomplished. It was the opposite of that of both his antagonists, for both depleted. Thus Beach, the antithesis of Thomson, and yet his colaborer, became the founder of an American system in medicine, antagonistic to that of Thomson. His followers believed in education, they believed in colleges, they believed in surgery and the sciences, and in rationally employing whatever could be properly utilized, from whatever source it came, whilst the methods of Thomson were those of teaching the people *directly*, through travelling agents and by person. Antagonistic were these two, in all points touching systematic medical education.

The name "*eclectic*" was applied to the followers of Beach, who claimed the privilege of selecting from any source whatever, as they saw proper. whatever could be properly utilized. They made their code of ethics the "Golden Rule" only. They did not recognize the authority of the regular profession as concerns doses or medicines. Thus, they too were "irregulars" in the eyes of the legalized part of the medical profession and needs be suppressed.

But yet the widely divergent Thomsonians or botanics (for Thomson eschewed minerals altogether) were, strangely enough, confounded by most legalized practitioners with the eclecticists, whose precepts were merely those of greater kindness to the sick and a closer study of the American *materia medica* than was practiced by either the Thomsonians or the regulars. The eclecticists, as was their duty, even more forcibly and systematically than did the Thomsonians, fought bitterly the bleeding, blistering, mercurial purging and salivating methods still prevalent in the mother school, but not less earnestly did they oppose the sweating, the vomiting, and the heroic, enervating "courses" of the Thomsonians. But not even the Eclecticists of that early day could altogether escape the prevalent theories concerning disease and disease names, as well as many questionable methods, inculcated from abroad. Slow, indeed, is the process mankind travels from established error to intellectual freedom! Aiming to parallel, in a more kindly way, the processes of both the regular school and the Thomsonians, the Eclecticists yet believed in treating diseases by name, in the use of violent cathartics, and, as is known, in this direction they (King) introduced the "resin of podophyllum" (1835), subsequently known as the "Eclectic calomel." They also believed in counter irritants, producing thus running sores, for the purpose of relieving underlying affections, and in this direction devised their "compound tar plaster," to be used instead of old school applications of croton oil, cantharides, and tartar emetic. Whoever has seen its effect will not question its severity. They believed somewhat in emesis, and for this purpose devised "compound tincture of sanguinaria," and "compound lobelia powder," utilizing in the first a drug introduced by Barton, and in the other the banner drug of Thomsonianism. In view of such facts as these, as perhaps seems reasonable, the adherents of the Eclectic school, coming in the height of the warfare between Thomson and his antagonists and at the most vicious period of that conflict, were viewed as *renegades* by the old-school physicians, and by the Thomsonians as *pirates*. Between 1840 and 1860 this triangular war waxed hotter and hotter, each faction fighting bitterly the others, but each engaged earnestly, as they saw life's duties in their task of relieving mankind of ills, even though the attainment of the object necessitated, where heroic medication was involved, the death of the individual.

Warring of the Heroics.-But in all this, let us not forget the people who were so vitally concerned in this war of the professions. The good in each benefited the people, the wrong of one or of all injured them. Each home in America became involved, one way or the other. Under the influence of Thomson and of Beach home-made remedies increased, whilst under their combined but yet disconnected attacks criticisms of the profession became more pronounced. The cruelties of the transplanted mediaeval ages, as exemplified for centuries in bleeding, blistering, and salivating, were illustrated in print and depicted in lecture, in the home, the school house, the church. The dominant school as well as the Thomsonians felt the touch. They indignantly resisted, but yet under the influence of transpiring events they lessened their doses and gradually abandoned their depleting processes. Then, at last, it was discovered that barbarism, in these lines at least, was unnecessary. But yet, all seemed to believe in fighting disease, not in preventing its occurrence.

Came, now, in the seeming day of victory, tribulation to the Thomsonians. The people had become better educated, better fed, and better clothed. The methods of times gone by would no longer be tolerated. The Eclecticists, too, felt the influence of the times, and discovered that their enormous and too often nauseating doses of syrups, of vinegars, and of compound tinctures were neither desirable nor necessary. They, too, began to look upon what had previously been their ideal of greater *kindness* as a process of less *cruelty*. About 1860, came the ending of the more heroic phases and processes of Eclectic medication.

The old school, as shown by the records, had during this period assimilated many remedies native to America, the Thomsonians had about abandoned their lobelia courses and had lessened the enormous doses hitherto employed, whilst the Eclectics had discovered that disease expressions could be controlled by more kindly methods and by smaller doses than had been advocated by Beach. A great number of the remedial agents suggested by Barton, but neglected during this period of his old-school disciples, had in small doses become favorites in the Eclectic school, some of them being reintroduced from Eclecticism to the school of Barton. Some remedies developed by the rivals of the school with which Barton affiliated had also become established, in many cases, the world over. To such an extent was this true as to have given (about 1860) to the major number of American remedies of the Eclectics the name, "Eclectic medicines."

Advent of Homeopathy.-Let us now consider a phase of the American materia medica as yet neglected but of more than a little consequence. This was the advent of homoeopathy about the beginning of the last century. The homoeopaths believed in kindness to the sick and practiced it. They believed in sanitary methods and in good nursing, and, as far as possible, these precepts were enforced. They believed in cleanliness and made this one of the tenets of their practice, They believed in small doses, even unto what, in the opinion of other schools, was mathematical extermination of a remedy, These together constitute some phases of preventive medication. Such as this appealed to many of the more cultured portions of the people who, in the face of ridicule, gave the homoeopathic physician a hearing. About the middle of the last century the influence exerted by the homoeopathist was certainly greater than was appreciated by those involved in other directions in medicine. Indeed, it is questionable whether homoeopathy has been, even to the present day, credited with its due part as concerns the extermination of the conspicuous barbarisms connected with the overdosing and underfeeding of those days. and its attendant evils. Be this as it may, the advent of homoeopathy at the beginning of the last century was considered so unimportant and their beliefs so chimerical as to have attracted little attention other than passing ridicule from any of the active forces we have mentioned. The chief antagonism against homoeopathy came from those who had no conceptions of preventive processes but who believed that the value of medication consisted in heavy, materialistic sledge-hammer doses. By such, it was felt that homoeopathy meant an abandonment of the afflicted to the enemy, disease. Those who advocated homoeopathy were naturally thrown into the class of charlatans and quacks. Their opposition to heroic measures was considered as a neglect of the patient, while the theory of attenuations was incomprehensible. Nor was this view of the methods of the homoeopaths restricted altogether to the dominant school, for the Eclectics and the Thomsonians differed from the homoeopaths as concerns dosage about as much as did the regulars. A common cause, however, threw the minority (irregular) sections together, in the face of a general enemy bound on their subjugation. Their efforts, regardless of the theories that each maintained, were, when necessary, united against professional extinction of the "irregulars." Thus the crusades went on, until about 1860 it became apparent to a few leaders in the Eclectic section in medicine that not only was there no necessity for excessive doses of even innocuous drugs, but that the action of drugs, in a therapeutic sense, was far separated from active physiological shock. It became apparent, indeed, that shock to the patient, even that of post-Eclectic methods, often retarded or even *prevented* a return to the normal. Thus was introduced a new epoch in the direction of American medicine as concerns the men now chiefly concerned in the evolution of the American materia medica.

PART III

Conditions in 1860.-Let us remember that under the afore-named influences and the age of reason, in 1860, the physician of the Allopathic or old school, who bled, blistered, and salivated, had become the exception. Indeed, the cantharides plaster and the croton-oil vesicant were at that date about all that lingeringly maintained a place in the practice of the followers of old-time heroics.

Let it be remembered that the followers of Thomson had changed their name to *Physiomedical*, and that they had practically abandoned the sweating and the *lobelia courses* of their founder. The Eclectics, also, as the result of reflective opportunities and experimental experiences, as well as from their pharmacy studies of plant products, had abandoned many of their cruder compounds of the early days of Beach, and had become discouraged as concerns a system of therapy dependent upon the physiological action of such remedies as they had themselves introduced and developed. Even cathartics were no longer viewed with favor.

John Milton Scudder (Eclectic Revolutionist).—Came, then, John M. Scudder, a man of resources, an observer, independent, hopeful. If he did not originate the theory so actively promulgated by him, he grasped the situation, and, being at the head of the Eclectic school, commanded their forces. With a courage that even his antagonists (for necessarily he had many) admired, Scudder berated the weaknesses in the Eclectic school. Although he never lost an opportunity to attack wrong of outsiders as he saw the wrong, his crusade was directed more in the direction of overcoming evils from within and correcting home faults. The "Eclectic compounds" of old were within a reasonable period practically exterminated by him and his adherents. Conglomerations (syrups, compound tinctures, powders, "shotgun mixtures," etc.), with a few exceptions, were irresistibly decried. The theory of diseases being treated *by names* was combatted, both with ridicule and with argument. The *specific action* of a drug, not the guessing of the effect of a mixture, became his slogan. The individuality of a *single* remedy was studied in connection with its action in varying phases of disease expression. No longer was a disease viewed as an invading enemy known by a name, but as a rational departure from the normal, in which a systematic wrong might, under many disease names, cry for the same remedy. The doses advocated were very small, and for the therapeutic action only, never the physiological shock. Such views were, in the very nature of things, revolutionary. Antagonists from within the Eclectic school called Scudder a pseudo-homoeopath. They resisted and combatted him, separately and collectively. Serenely, however, Scudder, unruffled, pursued his carefully devised course. Neither vindictive nor personal was he, his object being the eradication of the questionable materia medica part of Eclectic medication, and the rational application of drug remedies where it could be proved that they exerted a direct, kindly so-called commercial influences were not abruptly nor yet recently thrown into the field. Upon the contrary, beginning in the earliest days of the therapy of American drugs, we find a dominating influence to be what is known as commercialism but which is very difficult to define. It was linked with the early record, in Massachusetts as well as in Pennsylvania. It was woven into some of the efforts of conspicuous men, who wrote and copyrighted books, as well as of Samuel Thomson and some of his followers. It touched nearly every phase of professional effort throughout America, continuously pursuing its course under various phases, until about the middle of the last century, when came into play such factors as the manufacturing establishments that in pharmacy wedged themselves into the field of medicine, dominating at last, as can be perceived. many sections in manipulative pharmacy that had previously belonged exclusively to the apothecary. Of these, their influences, methods, and such, we can not now speak. Let us not forget that in the opening of the present century and the closing of the last came another phase of commercialism in the university methods, chiefly centering in the progressive German institutions of scientific instruction. Needless is it to suggest that these influences have come to be a mighty factor at the present time and that, in the processes now in vogue, wherever patent protection is possible through the opportunities of patent laws, the contrasted attempt Samuel Thomson once made to secure protection by his patent process is insignificant. But as already intimated, these phases of the problem, entering as a thread into the very beginning and at the present time sweeping all before it as in a mighty net, can only be referred to as a subject which must not be overlooked, and can not rest unmentioned.

What of the Present?-Thus we come to the present day. And if this history of the past be correct, we can, through this brief synopsis, form an opinion of the tortuous journey of the American materia medica from its beginning in the day of the Colonial pioneer to the present. In it, as we look back, the men constituting these antagonistic forces were incapable of comprehending the part they were taking in a far-reaching problem, whose end, in connection with the efforts of those today involved, is not less surely hidden from us of the present. It seems to me, when I revert to what I have written, as though the most interesting phases and side lines connected with the pharmacy (altogether neglected), the educational problems (practically untouched), the hopes, ambitions and antagonisms, the personalities of the parties involved, the many authorities, important as well as seemingly unimportant, unmentioned by me, the forgotten or overlooked ideals of good men involved in antagonistic directions, these and such as these far overshadow that which I have presented. It has been my aim to present a comprehensive view of the important features or epochs connected with the history and the development of what is known as the American materia medica.

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