AN

# HISTORICAL SKETCH

OF THE

# STATE OF AMERICAN MEDICINE

BEFORE THE

# REVOLUTION;

BEING THE ANNUAL ADDRESS DELIVERED BEFORE THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, FEBRUARY 1st, 1842,

BY

JOHN B. BECK, M. D.

PRESIDENT OF THE SOCIETY, PROFESSOR OF MATERIA MEDICA AND MEDICAL JURISPRUDENCE IN THE COLLEGE OF PHYSICIANS AND SURGEONS OF THE CITY OF NEW YORK; ONE OF THE PHYSICIANS TO THE NEW YORK HOSPITAL; CORRESPONDING MEMBER OF THE ROYAL ACADEMY OF MEDICINE OF PARIS; CORRESPONDING MEMBER OF THE MEDICAL SOCIETY OF LONDON, ETC. ETC.



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From the Foundation of the State Medical Society

## Art. V. Annual Address *delivered before the Medical Society of the State of New-York, Feb.* 1, 1842, *by* John B. Beck, M. D., *President of the Society.*

The profession of medicine must ever occupy a conspicuous station in the literary and scientific history of a nation. Independently of its being devoted to purposes of high utility and exalted benevolence, the necessary alliance which there exists between medicine and the other departments of science, will always confer upon it a peculiar pre-eminence over every other professional pursuit. So intimate, indeed, has been this alliance, that we shall find on the one hand, medicine receiving laws in succession from philosophy, mathematics, and chemistry; and on the other hand, the members of the medical profession will be recognized to have been, in every age and country, among the most successful cultivators of general science. What the effects of this association have been, it is not material at present to inquire. It is sufficient to state the fact itself, to show the importance of medical history. In this country, the history of medicine derives an additional interest from the striking illustration which it presents of the influence which a free government exerts over the character and progress of science. It is unquestionably true, that our medicine participates largely of that spirit of independence, which characterizes the civil and political institutions of our country. It was not, however, until after the revolutionary war that this was the case, when the medical mind of our country emancipated itself from an inglorious servitude to foreign authority, and at once put forth a character of boldness and enterprise which has laid the solid foundation of its future honors. That portion of its history which has been selected as the subject of the present notice, was not so fortunate. It ought not on that account, however, to be neglected, and I have judged that it would be neither useless

nor uninteresting to present a sketch of it to a society, which has aided, in no small degree, to advance the character of our profession. It will serve to contrast the past with the present state of our art, and at the same time recall to our grateful remembrance the memory of many distinguished men, who amid numerous discouragements, did much to elevate and adorn it.

As may naturally be presumed, in a country circumstanced as the American colonies were for a long period after their original settlement, the medical profession continued for a succession of years in a low and degraded condition. In point of respectability, it undoubtedly stood lower than either the legal or theological professions. The persecutions of the mother country had filled the ranks of the latter with men of learning, talents and piety—while the offices of honor and emolument under the crown, offered allurements sufficiently powerful, to induce many who were distinguished in the law to emigrate to this western world. With medicine it was far otherwise. It is only in populous towns and cities that our art can flourish, and the wilds of America, however fragrant they might be with the spirit of freedom, offered no attractions to the medical men of the old world. The advantages attending an emigration were too distant and precarious to warrant such a step; and accordingly for a long time, with some few exceptions, none but those who had failed to attain respectability or employment at home, would venture on so dangerous an experiment. Nor were the young native physicians for a long time calculated to remedy the evil. To become a well qualified physician, requires a course of study and a variety of observation which was not to be obtained in any of the colonies. There were neither lectures nor hospitals which could be resorted to, while the great expense attending a foreign education put it out of the power of all, except a favored few, to avail themselves of the only means of becoming regularly instructed. Under such circumstances it was not to have been expected, for a long series of years after the first settlement of the country, that our profession would be at all distinguished for character or knowledge. The progress of civilization, an

augmenting population, together with the increasing facilities of European communication, tended gradually to meliorate this condition of things, and for many years preceding the revolution, medicine could boast of not a few names who shed a lustre upon the profession to which they belonged.

With these preliminary remarks, I propose to give a brief sketch of the state of medicine in this country anterior to the revolution, and, for the sake of convenience, shall consider it under the three divisions of *medical practice*, *medical literature*, and *medical institutions*.

MEDICAL PRACTICE.

The earliest practitioners of medicine in this country appear to have been the clergy—this was at least the case in New-England, where, for several years after the first settlement of the colony, the functions of the physician and divine were performed by the same individual. This combination has not been uncommon in the history of the world. In the early dawn of medicine, the priests of Egypt and Greece collected and preserved what was known of the healing art, and in the infancy of every country the same association will probably be found to exist. Nor is it, by any means, an unnatural one. Physical and moral evil are so intimately connected that those who are administering relief to the one, cannot be regardless of the other. Hence, in the absence of the regular physician, the priest appears to be his most proper representative. Besides this, the character of the first emigrants, and the high tone of religious feeling which drove them for an asylum to this western world, continued for a long time to give a preponderating influence to the clergy, in all the secular as well as religious concerns of the colony. In the annals of the first colonists, accordingly, will be found the names of several clergymen who practised the healing art. Besides these, some of the first governors of the eastern colonies also practised physic. Two of them, of the name of Winthrop, appear to have been particularly celebrated. One of them was Governor of Massachusetts, the other of Connecticut and New Haven. Of the latter, Cotton Mather says: "he was fur-

nished with *noble medicines*, which he most charitably and generously gave away upon all occasions," (Magnalia, p. 31.) He was a member of the Royal Society of London, and some of his communications are to be found in their transactions. Amid such practice, however, as this must necessarily have been, it is easy to conceive that nothing could be done to improve the state of medicine, and that the greatest facilities must speedily have been offered for successful imposition upon the credulity of the public. This supposition is fully confirmed by the fact that so early as the year 1649, a law was passed in Massachusetts, "that no chirurgeons, midwives, physicians, or others, presume to exercise, or put forth any act contrary to the known approved rules of art, in each mystery and occupation, nor exercise any force, violence or cruelty, upon or towards the body of any, whether young or old, (no, not in the most difficult and desperate cases,) without the advice and consent of such as are skillful in the same art, (if any such may be had,) or at least of the wisest and gravest there present, and consent of the patient or patients, if they be mentis compotes, much less contrary to such advice and consent, upon such severe punishment as the nature of the fact may deserve."* This appears to have been the very first attempt of the civil authority, in any of the colonies to put a restrainst upon those who pretended to the practice of physic. Salutary as this law may have been, in some respects, it afforded but a slender protection against the existing deficiencies in the profession. It made no provision for the education of medical men, and it established no test of their qualifications.

The State of New-York, I believe, is entitled to the honor of adopting the first effectual measures for regulating the practice of medicine. This was not, however, until so late a period as 1760, when the General Assembly of the Province ordained that "no person whatsoever should practice as a physician or

* General Laws and Liberties of the Massachusetts Colony, in New-England, revised and reprinted by order of the General Council, held at Boston, May 15, 1672.

surgeon, in the city of New-York, before he shall have been examined in physic or surgery, and approved of and admitted by one of his majesty's council, the judges of the supreme court, the king's attorney general, and the mayor of the city of New-York, for the time being, or by any three or more of them, taking to their assistance for such examinations such proper person or persons as they in their discretion shall think fit.*" If the person so examined was approved, a certificate was given, allowing him to practice physic or surgery, or both, throughout the province. In case of non-compliance, the penalty was a fine of five pounds.

In 1772 a similar law was adopted in New-Jersey. These examples were not imitated in the other colonies, where the practice continued unrestrained, and physicians were responsible to no authority for mal-practice. In Connecticut an attempt was indeed made to effect a reformation in this respect, but so strong was the current of prejudice against the measure, that it completely failed. As far as my investigations have extended, the foregoing is all that was done, or even attempted by the constituted authorities, in behalf of our profession, previous to the revolution; and it shows conclusively how little its present respectability is owing either to the colonial governments, or to the mother country.

During the period embraced in this sketch, the division of practice into distinct departments, so generally adopted in Europe, was not recognized in this country. Both physic and surgery were practised by the same individuals; besides this, it was the general custom for physicians to prepare and compound their own medicines. In the year 1765, Dr. John Morgan, a distinguished physician of Philadelphia, endeavored to introduce a change in the existing mode of practice, by recommending a separation of it into the three branches of physic, surgery and pharmacy, and appropriating each of these departments to a separate class of practitioners. Having spent several years of his life in the acquisition of professional

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* Laws of New-York, from 1752 to 1762, by Livingston & Smith, vol. ii. p. 198.

knowledge in countries where he had seen the practical operation of this system, he became deeply impressed with the importance of it to improve the character of the profession at home. On his return, he accordingly not merely recommended it in a discourse which he published, but adopted it in his own practice. Although in every respect fully accomplished, he consequently declined engaging in any surgical operations, and confined himself entirely to medicine.* Whatever may be thought of the general utility or propriety of such a plan, it was undoubtedly at that early period somewhat premature, and probably did not meet with much encouragement.

Until about the middle of the last century, midwifery was exclusively in the hands of females, and physicians were called in only in preternatural and tedious cases. According to Dr. Bartlett, of Massachusetts, Dr. James Lloyd was the first systematic practitioner in midwifery in that section of the United States. He had enjoyed the instructions of Warner, Sharp, Smellie and Hunter of London in 1753, and in the following year settled in Boston.† In 1756, Dr. William Shippen, Jr., on his return from Europe, commenced the same branch of professional business in Philadelphia; and although at this period physicians were scarcely ever employed in natural labors, it is stated by his biographer, Dr. Wistar, that he did away completely with this prejudice, and in the course of a few years was fully occupied.‡

These are the two first physicians employed as regular accoucheurs in this country, of whom we have any notice; and they deserve especial commendation, as having led the way in overcoming deep rooted prejudices, and in transferring to

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* A discourse upon the institution of medical societies in America, delivered at a public anniversary commencement held in the college of Philadelphia, May 30, 1765; with a preface containing the author's apology for attempting to introduce the regular mode of practising physic in Philadelphia. *Phila.* 1765.

† Medical Communications and Dissertations of the Mass. Med. Soc. vol. 2, p. 244.

‡ Eulogium on Dr. Wm. Shippen. By Caspar Wistar, M. D., Phil. 1818, p. 31.

the profession, from the hands of ignorant and uneducated females, the practice of a difficult and delicate art.

From the connection subsisting between the mother country and the colonies, as may naturally be presumed, the same doctrines prevailed in both, and the practice was essentially the same. At the beginning of the eighteenth century, the celebrated Boerhaave commenced his career. Gifted with every endowment natural and acquired—a mind powerful and generalizing—a fascinating eloquence—learning the most varied and profound, and a character radiant with every virtue, this great man was eminently qualified to take the foremost lead in the medical world. Not merely the age in which he lived bowed at once to the supremacy of his genius, but his doctrines continued to control the opinions and practice of medical men during the larger portion of a whole century. The leading feature in the system of this distinguished theorist, was the great and undue importance which he gave to the fluids in the production of disease. These, according to him, became variously changed, not merely in their physical properties, but in their chemical composition. They became morbidly thick or thin, while they were contaminated by acid and alkaline acrimonies, and various other morbific matters. To such conditions of the fluids, diseases were attributed; and medicines were supposed to act by counteracting and changing them. Such were the doctrines prevalent in the old world during the last century. Their influence was no less undisputed in this country, and the general practice was modified by them. In the management of diseases, medicines were accordingly given with the view of thinning or incrassating the blood, and altering its qualities. Much confidence was placed in the powers of nature, and the results of critical days watched with the greatest anxiety. On these, it was supposed that the *materies morbi* was discharged, and thus the relief of the patient effected. This matter was looked for chiefly in the urine, and according to Dr. Rush, "glasses to retain it were a necessary part of the furniture of every sick room."* In the treatment of fevers, sudorific medicines were

* Rush's Obs. and Inqs. vol. 4, p. 396.

principally resorted to, and to aid their operation, and to facilitate the elimination of the morbid matter, the supposed cause of disease, patients were confined to their beds, and cool air denied them in the most rigid manner. Bleeding was not a general remedy in fever. In yellow fever, so far as we can judge from the opinions of a single individual, it was considered of doubtful and even dangerous tendency. Dr. John Mitchell, a distinguished physician of Virginia, in his account of the yellow fever which prevailed there in the years 1737, '41 and '42, in speaking of this subject, says, "plentiful bleeding is a means commonly found most effectual to obtain this end, (i. e. to ward off local inflammation) in the benign inflammatory fevers; but we cannot apply this most effectual remedy in this disease, because it evacuates only or chiefly the red globules of the blood, which, as we see by its state taken notice of above, are in too small a proportion already; and bleeding further breaks the texture of the blood, which above all things is to be avoided in this disease; for after plentiful bleeding, the pulse sinks, or at least is so low and feeble about the state of the disease as to prove of dangerous consequence; which some instances I have known seem to confirm."* He did not however, discard bleeding altogether. In small quantities he found it servicable to prepare the system for other evacuations. The remedies which he principally relied on were sudorifics, but more especially cathartics. Upon the importance of this latter class of remedies, he dwells with peculiar urgency, and many of his views are characterized by great good sense and practical acumen. It was entirely by the observations and suggestions of this physician, that Dr. Rush, as he himself frankly acknowledges, was afterwards led to the free use of purgatives in the yellow fever of 1793.

In relation to yellow fever, the prevalent opinion at this period was, that it was a contagious disease. Both Drs. Mitchell of Virginia, and Lining of Charlestown, express decided opinions on this subject. Dr. Lining, too, expresses the

* American Medical and Philosophical Register, vol. 4, p. 198.

belief that like small pox and measles, it does not attack the second time. It is hardly necessary to state, that the accurate and extended observations of more recent times have completely disproved both these positions. Indeed if there be any one point in medicine which may now be looked upon as settled, it is that the yellow fever is not a contagious disease; and numerous observations incontestibly show that it may assail the human constitution a second time.

According to Dr. Rush in his account of the state of medicine between the years 1760 and 1766, bloodletting was used plentifully in pleurisies and rheumatisms, but sparingly in all other diseases,* a practice, it must be admitted, much more judicious and safe, to say the least, than the indiscriminate and sanguinary practice which was afterwards adopted by this distinguished theorist. At this period, according to the same authority, some of the most potent and useful articles of the Materia Medica were but partially exhibited, owing to the prejudices of the public, and in some measure to the fears of the physician. Among them were the Peruvian bark and opium, both of which it was frequently necessary to disguise by admixture with other medicines. Blisters were generally used, but their application was confined to the last stages of fevers. Dr. Rush says "wine was given sparingly even in the lowest stages of what were then called putrid and nervous fevers."† Nevertheless, I find that so early as 1746 the liberal use of wine in typhus fever was recommended by that distinguished physician, Dr. Colden, Lieut. Governor of the colony of New-York. In the year just mentioned, a fever of this description prevailed epidemically at Albany, and in many cases proved fatal. "It had the appearance of a remittent, with frequent low pulse, except in the paroxysms, when it was high; a dejection of spirits, great restlessness, an entire prostration of appetite, clammy sweats of a rancid, putrescent smell." By the physicians of the place, it had been treated as an intermittent, but without success. By the

* Observations and Inquiries vol. 4, p. 396.

† Ibid. vol. 4, p. 399.

advice of Dr. Colden, Madeira wine, to the extent of a wine glass full every four or five hours, was ordered, and with the happiest effects. One patient who recovered, drank a gallon in a few days. In all these cases the wine was given in the last stage of the disease.*

Although the physicians in the colonies generally followed the prevalent practice of the mother country, yet they are entitled to the credit of originating some modes of practice of great value. The most important of these is the application of mercury in the treatment of inflammatory complaints. This practice took its origin as far back as the year 1736, and the credit of originality is generally conceded to Dr. Douglass, a physician of Boston, by whom it was used in the angina maligna which prevailed extensively over the colonies at that period, and committed the most dreadful ravages.† By Dr. James Ogden, a respectable physician of Long Island, this practice was extensively applied in the same disease about the year 1749.‡ The preparation of mercury which was used was calomel. In consequence of the success which attended the use of this remedy in this disease, it was shortly after resorted to in other inflammatory complaints; and about the middle of the last century, it was in common use in this country in pleurisy, pneumonia, rheumatism, and others of the phlegmasiæ. I am aware that the credit of this practice is claimed elsewhere;§ but there can be no doubt that in its origin it is exclusively American, and that to our colonial physicians the world is indebted for one of the greatest improvements ever made in practical medicine.

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* Lond. Med. Obs. and Inq. vol. 1, p. 215.

† New England Journal of Medicine, vol 14, p. 4.

‡ New York Med. Repository, vol. 5, p. 97.

§ Dr. John Armstrong, in his work on Typhus, gives the sole credit of this practice to Dr. Robert Hamilton of Lynn Regis. In another place, I have shown the incorrectness of this statement. (See New York Medical Gazette, No. 1.) From the account of Dr. Hamilton himself, it appears that his attention was not called to the practice until the year 1764; whereas it had been in very general use in this country many years before.

Among the events which characterized the history of our colonial medicine, the most remarkable, and certainly the most exciting, were those which attended the introduction of the practice of inoculation for the small pox. This was first introduced into this country in the year 1721; and it is to a clergyman, Dr. Cotton Mather, that the honor belongs of having first recommended it. During this year the small pox raged in Boston with unparalleled fury and fatality. Dr. Mather having read, in the Transactions of the Royal Society of London, an account of a new mode of mitigating the violence of the disease by inoculation, as practised in Turkey, communicated it to the physicians of the place, and urged their adoption of it. With the exception of one individual, it was unanimously opposed by the faculty. This individual was Dr. Zabdiel Boylston, who, with the confidence of an honest and enlightened mind, commenced his operations upon his own children and servants.* The controversies which ensued were of the most ferocious and disreputable character. Such was the tempest of popular indignation raised against the practice, chiefly by the inflammatory conduct of the physicians, at the head of whom was Dr. Douglass, that both Drs. Mather and Boylston were in danger of losing their lives. Passion and prejudice on the one side were, however, met by decision and success on the other; and inoculation, defended by almost all the clergy, many of whom preached and wrote in its defence, soon triumphed over opposition, and became prevalent in Boston and the neighboring towns. From thence it was introduced into the other colonies, and although uniformly resisted at first, the public mind be-

* The first experiments by Boylston were made on the 27th June, 1721, on his own son, thirteen years of age, and two blacks in his own family, one of thirty six and the other two years of age, and all with success. During the prevalence of the small pox in that and the following year, he inoculated with his own hand two hundred and forty-seven of both sexes, from nine months to sixty-seven years of age. Thirty-nine were inoculated by other physicians after the tumult had somewhat subsided, making in all two hundred and eighty-six, of whom only six died. During the same period, 5,759 had taken the natural small pox, 844 of whom had died. See Thatcher's Medical Biography, p. 163.

came gradually reconciled to it. So early as 1738, it was practised in Charlestown, S. C. during the epidemic small pox which then prevailed there. In 1759 it was generally adopted in Philadelphia, where its dissemination was very much facilitated by a defence and recommendation of it by Dr. Redman. The true merit of Dr. Boylston, in relation to the introduction of inoculation, will not be appreciated unless it is stated that at this time the practice had only just found its way into Europe. By a singular coincidence, the first case of inoculation in Europe took place in England in April, 1721, only two months before the first experiment of Dr. Boylston, and entirely without his knowledge. This was the case of the daughter of Lady Wortley Montague. This celebrated female, during her residence in Constantinople, having become acquainted with the safety of the practice, had her son inoculated, and on her return to England, her daughter was subjected to the same operation, and with perfect safety.* This led the way to the speedy diffusion of the practice in England, as the experiments of Boylston did in this country. It is gratifying to know, that although opposed and slandered at home, this eminent physician was appreciated abroad. In 1725 he visited England, and was received with the highest favor and attention by the most distinguished characters in the nation, and even by royalty itself. He was elected a fellow of the Royal Society, being the first instance in which that honor was conferred upon an American.

Among the practices peculiar to the colonies, was the administration of mercury as a preparative to inoculation. By the illustrious Boerhaave, it had before this been suggested that mercury would prove an antidote to small pox; and from him, no doubt, the hint was taken. In 1724, Dr. Huxham also recommended calomel, not merely in the natural small pox, but also when inoculated.† It was only in the colonies, however, that the practice was tried on a large scale; and an interesting account of its effects has been left us by Dr. Ben-

* The History of the Inoculation of the Small Pox, &c. By William Woodville, M. D. vol. 1, p. 85.

† Woodville's History of Inoculation, vol. 1, p. 342.

jamin Gale of Connecticut, in a paper published in the Philosophical Transactions for 1765. The credit of the practice is given by him to Dr. Thomas of Virginia and Dr. Munson of Long Island, by whom it was established in 1745. According to the statements of Dr. Gale, it appears that the deaths from the natural small pox, before inoculation was introduced into New England, averaged 1 in 7 or 8; when inoculation was introduced, the deaths amounted to 1 in 30. By improvements and proper precautions, they were reduced to 1 in 80 to 100; and finally, by preparing the system by the previous use of mercury, the deaths were only 1 in 800 or 1000.*

For the early and prompt investigation, as well as the sound and original views which they advanced in relation to the pathology and treatment of that acute and now well known disease, croup, our colonial physicians are entitled to the highest applause. Although not unknown or unnoticed previously, the credit is generally conceded to Dr. Home of Edinburgh, of having given the first full description of this disease. This appeared in 1765. In 1771, Dr. Crawford published his "Disquisitio Inauguralis de Cynanche Stridula;" and in 1778 appeared the elaborate work of Michaelis of Gottingen, entitled "Dissertatio Inauguralis de Angina Polyposa sive membranacea." These were all the foreign publications which had appeared on this interesting subject. Between the years 1770 and 1781, in this country, Drs. Rush, S. Bard, Chalmers, Middleton and Bayley, all published in relation to it, and by them, especially the two latter, more correct views were enforced than had been entertained by Home and others. Contrary to the opinion of Home, that the secretion of mucus on the inside of the trachea was the cause of the disease, Dr. Bayley established the fact that the disease was an inflammation of the mucous membrane of the trachea, and that the effusion and false membrane were the consequences of this inflammation. Based upon the idea that it was an acute and

* Historical Memoirs, relating to the practice of Inoculation for the small pox, in the British American Provinces, particularly in New England. By Benjamin Gale. See Philosophical Transactions, abridged, vol. 12, p. 229.

rapid inflammation, the treatment recommended was of the most decided character. Blood letting ad deliquium—the free use of tartar emetic, at first to produce vomiting, and then to keep up nausea, together with the free use of calomel, were all originally recommended by them, although the credit of every one of them has since been claimed by others.* In determining the true nature of this disease, as well as the treatment most efficacious, the merit of Bayley stands pre-eminent, and the tract which he has left on this subject, is sufficient of itself to establish his reputation as an original observer, and an able and accomplished practitioner.†

If we may believe the authority of Dr. Douglass, who wrote about the year 1753, and of Smith, the historian of New

* As a sample of the manner in which practices originating in this country, are appropriated abroad, not from design, but ignorance, the following may be adduced. Dr. Stokes, in his recent and invaluable treatise on diseases of the chest, in speaking of tartar emetic in croup, holds the following language: "For the introduction of this inestimable remedy in the treatment of the croup, the science is indebted to Dr. Cheyne. In his Essay on Cynanche Trachealis, published in Edinburgh in 1801, we find the treatment recommended; and it is no small evidence in its favor, that in the year 1832, after an experience greater than falls to the lot of most men, the opinions of this philosophical investigator of disease have remained unaltered. How changed would be the character of medicine, if, in support of many of our remedies, there could be brought forward such evidence, and such an advocate." p. 144, Amer. Ed. Dr. Bayley recommended and used the same remedy, in the same way, and with the same objects in view, a quarter of a century before.

† Cases of Angina Trachealis, with the mode of cure: in a letter to William Hunter, M. D. &c. By Richard Bayley, Surgeon. Printed, New York, 1781. For the purpose of showing the views of Bayley in relation to the nature and cure of this disease, I shall quote the following from his paper. "When the Angina Trachealis is theoretically considered, there will probably be formed (as is generally the case when facts are not ascertained) opinions as various as the information and different faculties of men may suggest. I am induced to adopt the following: That the larynx, aspera arteria, and bronchial pipes have one common membrane, which, we are informed by injection, consists of little more than an infinity of bloodvessels, and consequently liable *to inflammation*, as all vascular parts are. An increased action of these vessels (as in pleuritic and puerperal fevers) occasions a preternatural secretion of lympth, which, from the ingress and egress of the air becomes condensed, and assumes the appearance of a membrane, and its

York, the general character of the profession could not have been very elevated, and quackery must have flourished in great perfection. Smith says, "few physicians amongst us are eminent for their skill. Quacks abound like locusts in Egypt, and too many have recommended themselves to a full practice and profitable subsistence. This is the less to be wondered at, as the profession is under no kind of regulation."* That in a state of society where the means of medical education were so scanty, and where no laws existed to regulate the profession or restrain admission into its ranks, quackery should be very rife, is certainly by no means singular. It would be unjust, however, to suppose that it is peculiar to such a state of society, or even that it prevailed to a

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compactness will depend on the age and habit of the patient and the state of the atmosphere.

"The common opinion is, that those who die of this complaint are suffocated by the membrane's closing the wind pipe. Another more respectable opinion is, that a spasm of the muscles of the larynx closes the scene. The circumstances which precede *death* in this disease, compared with those appearances which have regularly taken place in the cases which I have seen *successfully* treated, sufficiently explain the cause of the patient's death from the laws of the blood's circulation. To preserve the healthful state of an animal, it is necessary that the whole mass of blood should circulate through the lungs in a given time, and the free admission and expulsion of air contributes to this regular process; the change, also, which gradually takes place in the lungs, seems more directly to account for the swelled face, tumid jugulars and the full staring eyes, which are symptoms that accompany the progress of this complaint; and add to this, the larynx, aspera arteria and bronchia have been found pervious in every subject I have dissected, while the ramifications have been as regularly filled with a glairy mucus.

"From what precedes, it is obvious that the angina trachealis is considered as an *inflammatory disease*, the treatment of which must vary in every degree, according to its violence: and though the common antiphlogistic treatment will in some cases relieve, if early applied, yet the most desperate may yield to *repeated bleedings ad deliquium* from the jugulars, the free use of *tartar emetic* and other evacuants, with *a large blister* covering the larynx and aspera arteria, while the mucus filling up the ramifications of the bronchia may be emptied by the action of vomiting." See New York Medical Repository, vol. 14, p. 346. Although not published until the year 1781, the paper of Bayley contains the results of his observations and practice for a number of years previously.

* History of New York, by William Smith, A. M. p. 326.

greater extent than it does in the present day. Mortifying as it is, it is, nevertheless, a fact that it is peculiar to no particular age, or country, or state of society. It has existed from the earliest periods, and will continue to exist as long as human beings are found upon the face of the earth. The rude savage and the polished citizen are equally its victims, and civilization and refinement only render its forms more complicated and insidious. At no period in the history of this country, it may safely be asserted, has empiricism flourished to the same fearful extent as at the present time, notwithstanding our boasted improvements in other respects. Assuming a thousand different disguises, it is in many high places in our country, sapping the very honor of the profession, and corrupting it to the core. Notwithstanding the prevalence of quackery in the colonies, it does not appear that the well educated part of the profession lent it any countenance, and it would be well if the same could be said in the present day. A recollection of these facts should therefore moderate somewhat the severity of our judgment in relation to the state of our colonial medicine, at the same time that it should excite us to renewed diligence in endeavoring, if possible, to correct existing abuses.

### MEDICAL LITERATURE.

I come next to take a brief notice of the state of medical literature previous to the revolution. Although not abounding in materials of very high interest or importance, the medical literature of this period is by no means contemptible. In forming a judgment in relation to it, we should recollect the circumstances in which the American physician was placed, and the slender inducements which were held out to undertake the labors of authorship. The two great motives which induce men, in any age, to write—the love of literary distinction, and the hope of pecuniary gain, then exercised but a feeble and limited influence; and accordingly, the colonial physicians only turned authors on some special emergency of public duty, or for the purpose of promulgating and enforcing some new and useful mode of practice. The capabilities of our early physicians, therefore, ought to be judged of, not

so much by the quantity, as by the quality, of the productions which they have left us, and an impartial review of them will show us that they do not suffer by a comparison with the productions of their European brethren at the same period. Some of them were not thought unworthy of being published in the Transactions of the Royal Society, while others found a place in the publications of the learned medical associations of the day, in the mother country.

A brief review of what appeared in the colonies, will be, not merely interesting, as a matter of historical record, but will furnish the best evidence of the general drift and progress of medical mind during this period.

The earliest medical publications appeared in *Massachusetts*, and were called forth by the prevalence of epidemic diseases, and the first appears to have been a tract by Thomas Thatcher, a clergyman and physician, of Massachusetts. It was entitled "A Brief Guide in the Small Pox and Measles," and was published in the year 1677. Cotton Mather, in his Magnalia, gives the life of this person, and represents him as a man of learning and ingenuity.

In 1721, *Benjamin Colman*, a minister of Boston, printed a small pamphlet entitled—"Some Account of the New Method of Receiving the Small Pox, by Ingrafting or Inoculating;" in which he defends the practice of inoculation, which had just been introduced by Dr. Boylston.

Five years after this, Dr. *Boylston*, while on his visit to England, published there, at the request of the Royal Society, "An Historical Account of the Small Pox, inoculated in New-England." In the following year it was reprinted in Boston.

In addition to the above may be mentioned the names of Thomas Howard and Nathaniel Williams, both of whom were clergymen as well as physicians. The former wrote a Treatise on Pharmacy, in 1732; and the latter a pamphlet "On the Method of Practice in the Small Pox in 1730."

The most voluminous writer, however, who appeared at this period, was Dr. *William Douglass*. He was a native of Scotland, and emigrated to New-England about the year 1716.

Although a man of talent and learning, he appears to have been of an unhappy temper of mind, to which he gave loose in many of his writings. He was a most virulent opponent of the practice of inoculation, and did all in his power to excite popular indignation against it. Besides several publications on this subject, he has left a tract on the putrid sore throat distemper which prevailed epidemically in the colonies, entitled— "The Practical History of a New Epidemical Eruptive Miliary Fever, with an Angina Ulcuscolosa, which prevailed in New England in 1735 and '36." This was published in 1736, and is in every respect a paper of great value. Besides containing the fullest account that we have of this dreadful epidemic, it contains the first suggestion in relation to the use of calomel as a remedy. This essay has recently been reprinted in the New England Journal of Medicine and Surgery, vol. xiv. p. 1. The most elaborate work, of this author, was "A Summary, Historical and Political, of the First Planting, Progressive Improvements, and Present State of the British Settlements in North America." This was published in 1760, and contains some amusing notices of the state of the profession in the colonies.

These were pretty much all the medical writers of whom Massachusetts could boast for upwards of a century and a half.

In the middle and southern colonies, medicine appears to have been cultivated with much more success than in the eastern. This may be accounted for by the fact that the former enjoyed the services of several foreign physicians, who had early emigrated thither, enriched by the best medical education which Europe could afford. It appears also to have been more common with them to send their young men to foreign universities to complete their medical studies. In addition to all this, a taste for researches in natural history began to develope itself much sooner in some of the southern colonies, and doubtless produced a salutary effect in spreading the influence of liberal sentiments. To these causes is to be attributed the early superiority of the southern colonies more especially.

Of the colonial physicians none were more active or distinguished, than those of *South Carolina.* In 1734, a native of this state, *William Bull*, obtained a degree in medicine, at the university of Leyden, and on that occasion, defended and published an inaugural dissertation, "De Colica Pictonum." He had studied under Boerhaave, and seems to have commanded the respect of his associates. By the celebrated Van Swieten, he is spoken of in his commentaries as the *very learned* W. Bull.* In 1749 *John Moultrie* received the degree of doctor in medicine, at the university of Edinburgh, and published a thesis, "De Febre Flava." He was the first native Carolinian who obtained this honor at that university. According to Dr. Ramsay, ten other native Carolinians obtained the same honor, between the years 1768 and '78†. As more particularly distinguished in this section of the country, the names of Drs. *Lining*, *Chalmers* and *Garden*, deserve to be especially noticed. They were all natives of Scotland, and emigrated in the earlier part of the last century. Being men of unquestioned abilities, learning and enterprise, they contributed greatly, both by their influence and writings, to elevate the character of the profession. To Dr. *John Lining*, we are indebted for some of the most valuable statical experiments ever published. They were continued throughout the whole of the year 1740. He ascertained his weight in the morning and evening; the weight of the food which he swallowed, and the weight of the urine and alvine excretions ejected. The result of these troublesome experiments was published in 1743, in the Transactions of the Royal Society of London.‡ In 1753 he published "A Description of the American Yellow Fever," in a letter to the celebrated Dr. Robert Whytt, professor of medicine in the

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*Hœc colica in regionibus Americæ meridionalibus tam frequens est, ut fere pro morbo endemio haberi possit; uti ab *Eruditissimo* viro Gulielmo Bull, in his oris nato, et, nunc feliciter ibi medicinam exercente, sœpius audivi, qui et pulchram de hoc morbo scripsit dissertationem inaugularem, quam de academia Lugduno Batava defendit anno 1734. Van Swieten's Commentaries, vol. iii. p. 357.

† Ramsay's Review of Medicine in the 18th century. New-York Medical Repository, vol. iv. p. 398.

‡ Vol. xlii. p. 491. Thomson's History of the Royal Society, p. 129.

university of Edinburgh. This was the first account of this terrible disorder which had emanated from this continent, and stands to this day unrivalled for the general accuracy and minuteness of its description.*

To Dr. *Lionel Chalmers* we are also indebted for several valuable productions. In the year 1754 he communicated to the Medical Observations and Inquiries of London, a paper on the *Opisthotonos and Tetanus.* These appear to have been very prevalent at that time, in Charlestown, and Dr. Chalmers seems to have had a large experience in them. The remedies which he principally recommends are, blood-letting in the commencement, the warm bath, the free use of opium and emollient enemata.† In 1768 he published "An Essay on Fevers," in which he enters into an extensive discussion of the theory of febrile diseases, and proposes a new method of treating them. Contrary to the prevalent belief of the time, Dr. Chalmers endeavors to show that the cause of fever is not to be sought for in the fluids, but in the solids, and he considers the immediate cause to be "a spasmodic constriction of the arteries and other muscular membranes." Whatever can give much pain or stimulate the nerves so as to cause them to excite such constrictions, he thinks may bring on fever. As an inevitable consequence of this spasm and constriction, irrregular distributions of blood take place, producing engorgements of the different viscera, and to this irregular circulation are owing all the phenomena of fever. Spasm of the extreme arteries and irregular distribution of the blood being the leading features of fever, he recommends two indications in the treatment. First, to relax the spasm—second, to relieve the internal fullness of the system; and the two agents which he recommends for accomplishing these purposes are, sweating and purging. Such is a very brief account of his theory of fever, which he supports with much talent and learning. The whole work displays a compass of observation, and a power of theoretical discussion, which should have raised its author to a higher rank than he seems to hold in the lists of medical fame. To perfect origi-

* Edinb. Essays and Obs. vol. ii. p. 370.

† Vol. i. p. 87.

nality, the theory of Dr. Chalmers can lay no claim. The doctrine of spasm had been previously suggested by the celebrated Hoffman, from whom both Chalmers and Cullen doubtless borrowed it. Whether Chalmers was at all indebted to Cullen for any of his views on this subject, it is not easy to say, although it seems very improbable, the essay of Dr. Chalmers having appeared several years before the "First Lines" of Dr. Cullen were presented to the public. Besides this, Dr. Chalmers was the author of an extensive and valuable work on the climate and diseases of South Carolina, in two volumes.* He also recorded and published an important series of meteorological observations at Charlestown, continued for ten years, i. e., from 1750 to 1760.†

Dr. *Alexander Garden* was another distinguished physician of Charlestown at this period. From all the accounts which we have left of him, he appears to have been a man not merely thoroughly versed in his profession, but highly accomplished in literature and general science. He was much devoted to natural history; and the Transactions of the Royal Society contain several of his papers on this department. As a proof of the high estimation in which he was held, it may be mentioned, that Linnæus, with whom he corresponded in Latin, gave the name of Gardenia (in honor of him) to "one of the most beautiful flowering shrubs in the world." He was a member of the Royal Societies of Upsal and of London. The only medical production which he has left, is an account of the anthelmintic properties of the *Spigelia Marylandica*, together with a botanical description of the plant.‡

*Virginia* could also boast of some distinguished men in the profession; and among these especially were *Clayton* and *Mitchell*. Dr. *John Clayton* was of English origin, and came

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* An Account of the Weather and Diseases of South Carolina, by Lionel Chalmers, M. D., of Charlestown, S. C., 2 vols. London, 1776.

† A general table of the results of these observations may be seen in his work on Carolina, vol. i. p. 42.

‡ Edinb. Essays and Observations, Physical and Literary, vol. 3, p. 145. For an interesting account of Dr. Garden, see Ramsay's History of South Carolina, vol. ii.

to Virginia about the year 1705.* He was particularly eminent as a botanist, and devoted a long life to the investigation of the plants of Virginia. As the result of his labors, he published in 1743 a *Flora Virginica.* It was afterwards republished by Gronovius at Leyden, in 1762.† Besides this, he published in the Philosophical Transactions several papers in relation to the culture of the different varieties of tobacco, together with a full account of the medicinal plants of Virginia. The celebrated author of the Notes on Virginia, has left the following respectful testimony to the character of this eminent naturalist and physician. "This accurate observer was a native [incorrect] and resident of Virginia, passed a long life in exploring and describing its plants, and is supposed to have enlarged the botanical catalogue as much as almost any man who has lived.‡"

Dr. *John Mitchell* was another Englishman who emigrated to Virginia about the beginning of the last century, and no less distinguished for his attainments in medicine and natural history. The productions by which his name has been handed down to posterity are, "An Essay on the Causes of the Different Colors of People in Different Climates," and "Letters on the Yellow Fever of Virginia." The first of these is a production of no ordinary character. It was published in the Philosophical Transactions of 1743, and occupies about fifty pages. The first part of this paper is occupied with the consideration of the cause of the color of the skin generally, and he endeavors to establish the following propositions: 1. That the color of white people proceeds from the color which the epidermis transmits; that is, from the color of the parts under the epidermis, rather than from any color of its own: 2.

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* Thatcher's Med. Biography, p. 224.

† Flora Virginica exhibens plantas quas nobilissimus vir D. D. Johannes Claytonus Med. Doct. &c. in Virginia crescentes observavit, collegit et obtulit D. Joh. Fred. Gronovio, cujus studio et opera descriptæ et in ordinem sexualem systematicum redactæ sistuntur. Lugduni Batavorum 1762.

‡ Notes on Virginia, by Thomas Jefferson, p. 63.

That the skins of negroes are of a thicker substance and denser texture than those of white people, and transmit no color through them: 3. That the part of the skin which appears black in negroes, is the corpus reticulare cutis, and external lamella of the epidermis; and all other parts are of the same color in them with those of white people, except the fibres which pass between these two parts: 4. That the color of negroes does not proceed from any black humors or fluid parts contained in their skins, for there is none such in any part of their bodies, more than in white people: 5. The epidermis, especially its external lamella, is divided into two parts by its pores and scales, two hundred times less than the particles of bodies, on which their colors depend. Having established these propositions by a series of facts and reasonings, he comes to the conclusion that the proximate cause of the color of negroes is three-fold, viz: the opacity of their skins, proceeding from the thickness and density of their texture, which obstructs the transmission of the rays of light from the white and red parts below them; together with their greater refractive power, which absorbs those rays, and the smallness of the particles of their skins, which hinder them from reflecting any light. The difference thus depending upon a difference in the texture of the skin, he next proceeds to show that the different colors of the human race can readily be explained by the effect of climate and mode of life, in modifying the texture of the skin. He supports the scriptural doctrine of the common origin of man, and thinks the primitive color was a medium between white and black, "from which primitive color the Europeans degenerated as much on the one hand as the Africans did on the other; the Asiatics, unless, perhaps, where mixed with the whiter Europeans, with most of the Americans, retaining the primitive and original complexion."§ Such is a brief account of this most ingenious and elaborate paper. Any analysis of it, however, must do it injustice. To

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§ See the Abridgement of the Philosophical Transactions, by Drs. Hutton, Shaw and Pearson. Vol. 9, p. 50.

appreciate the philosophical acumen and learning which it displays, it ought to be read at full length.

Another paper by Dr. Mitchell is an account of the yellow fever which prevailed in Virginia in 1741, of which I have already had occasion to speak in a previous part of this discourse. This was not published at the time, but the manuscript fell into the hands of Dr. Franklin, by whom, a short time before his death, it was given to Dr. Rush. It has since been published in Coxe's Medical Museum, and in the Medical and Philosophical Register of New-York.*

Another physician of Virginia, and a native, Dr. *John Tennent*, deserves to be mentioned, as having written the first account of that valuable medicine, the *Polygala Seneka*. By him it was used freely, after depletion, in pleurisy and peripneumony, and, as he states, with great success. This appeared in 1736.†

Among the medical men of *Pennsylvania*, there are several who are entitled to notice, as having contributed to the colonial literature of our profession. In 1740 Dr. *Thomas Cadwallader*, of Philadelphia, published "An Essay on the Iliac Passion," in which he exposes the absurdity of the practice then in vogue, viz: that of treating it by quicksilver and drastic purges. He recommends in their stead, mild cathartics, with the occasional use of opiates.‡ By Dr. *Thomas Bond*, an eminent physician of Philadelphia, two communications were published in the London Medical Observations and Inquiries, one an account of a worm bred in the liver,§ 1754; another on the use of bark, in scrofulous cases, 1759.‖ The men, however, who were particularly distinguished, in Philadelphia, for their zeal in the cause of medical science, were Drs. John Morgan and William Shippen, both natives of that place, and the founders of the first medical school established in this

* Two Letters, vol. iv. pp. 183, 383.

† See Edinburgh Medical Essays and Observations, vol. v. p. 376.

‡ Miller's Retrospect of the Eighteenth Century, vol. i. p. 317.

§ Vol. i. p. 68.

‖ Vol. ii. p. 265.

country. Dr. *Morgan*, after studying medicine at home, went to Edinburgh, where he received the doctor's degree, on which occasion he published an elaborate thesis on the formation of pus—"Tentamen Medicum de Puris Confectione, Edinburgh, 1763." In this dissertation he maintained the doctrine that *pus is a secretion*, prepared by a peculiar action of the secret tory vessels of the part. The credit of originality, as it regards this doctrine, has generally been awarded to the celebrated John Hunter. The evidence, however, appears to be conclusive, that he was anticipated by Dr. Morgan.* After receiving his degree at Edinburgh, he travelled for some time on the continent, industriously engaged in acquiring knowledge, and every where received with the highest honor. As a proof of the estimation in which he was held abroad, it is only necessary to state, that on his return home, in 1765, he was a fellow of the Royal Society of London, corresponding member of the Royal Academy of Surgery of Paris, and licentiate of the Royal Colleges of Physicians of London and Edinburgh. Notwithstanding his devotion to science, Dr. Morgan was not a prolific author. Besides his Thesis, all that we have left is his "Discourse," already noticed, "On the Institution of Medical Schools in America," in 1765, and "A Recommendation of Inoculation, According to Baron Dimsdale's Method," 1776.

Dr. *Shippen*, was born in 1736, and about the year 1760 took his degree at Edinburgh, on which occasion he wrote and published a thesis, "De Placentæ Cum Utero Nexu." Besides this I do not know that he published any thing, but he

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* See Cullen's First Lines, edited by Prof. Charles Caldwell, vol. i. p. 225, note by Prof. Caldwell. Dr. James Curry, lecturer at Guy's Hospital, also gives the credit of priority to Dr. Morgan, and he adds: "I could not avoid giving that merit to Dr. Morgan, who discussed the question with great ingenuity, in his Inaugural Dissertation, on taking his degree at Edinburgh in 1763; whilst I could find no proof that Mr. Hunter had taught, or even adopted such an opinion, until a considerably later period." See Lond. Med. and Phys. Journal for 1817; also, New-England Journal of Med. and Surg. vol. vi. p. 404.

is greatly and justly celebrated as the first person who lectured on anatomy in this country.

Last, though not least, the contributions of the eminent men who adorned our profession in *New-York*, require to be briefly commemorated. Among these, the first place is unquestionably due to *Cadwallader Colden*. He was a native of Scotland, and received his education at the university of Edinburgh. In 1718, he settled in New York. He soon, however, relinquished the practice of physic, and became a public character, holding in succession the offices of surveyor general of the province, member of the council, and finally lieutenant governor. Although thus withdrawn from the profession, he did not lose his fondness for medical and philosophical pursuits. Among his medical productions is an "Account of the Climate and Diseases of New York." This was published when he was surveyor general of the province, about the year 1720. It is an exceedingly interesting paper, giving as it does the only account we have of the climate and diseases of this city, at so early a period. In relation to consumption, now so fatally prevalent, he makes the following interesting remarks: "the air of the country being almost always clear, and its spring strong, we have few consumptions, or diseases of the lungs. People inclined to be consumptive in England, are often perfectly cured by our fine air, but if there be ulcers formed, they die in a little time."* He also wrote "Observations on the Fever which Prevailed in the City of New-York in 1741–2," in which he made a number of valuable suggestions in relation to the draining and purification of the city, with the view of preventing the recurrence of the disease.† Besides these he published a treatise "On the Cure of Cancer," another "On the Virtues of the Great Water Dock;‡ also, a letter on the "Sore Throat Distemper, which prevailed epidemically in this country," in 1735.§ Dr. Colden also pursued the study of botany

* Medical and Philosophical Register of New-York, vol. i. p. 309.
† Ibid, vol. i. p. 324. ‡ Ibid, vol. i. p. 300.
§ London Med. Obs. and Inq's. vol. i. p. 215.

with great assiduity. He described between three and four hundred American plants, which were afterwards printed in the Acta Upsaliensia. In honor of his daughter, who imbibed the ardor of her parent in this science, Linnæus named a plant of the tetandrous class, that was first described by her, *Coldenia.*

Dr. *John Bard* was long an eminent practitioner of New-York. His professional writings, however, are few. They are—"A Case of Extra Uterine Fœtus," published in 1760, in the London Obs. and Inq's.;* several papers on the nature and character of the yellow fever, and "An Essay on the Nature and Cause of the Malignant Pleurisy," which proved so fatal to the inhabitants of Huntington and some other places in Long Island in the winter of 1749.†

Of the physicians, of New York none were more distinguished for their learning and ability, than Dr. *Peter Middleton.* On the formation of the medical school of New York, he was appointed professor of the theory of physic. At the opening of the school, in 1769, he delivered a discourse in which he took an extensive survey of the state of medicine among the different nations of the globe. This production was afterwards published, and affords ample proof of the learning and ability of the author.‡ He also wrote a valuable practical letter on the "Croup," already alluded to."§

Dr. *John Jones* was a native of Jamaica, Long Island, and was born in 1729. Having acquired the elements of his profession at home, he repaired to Europe, and enjoyed the advantages of tuition under the most renowned men of our pro-

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* Vol. ii. p. 369.

† Med. and Philos. Register, vol. i. p. 409.

‡ A Medical Discourse or an Historical Inquiry into the Ancient and Present State of Medicine; the substance of which was delivered at the opening of the medical school in the city of New York: by Peter Middleton, M. D. and Prof. of the theory of physic in King's College: New-York, 1769, pp. 72. A copy of this is in possession of the writer.

§ This letter was published in 1780, and addressed to Dr. Richard Bayley. In it, he sanctions the practice of Dr. Bayley, as confirmed by his own experience. See New-York Med. Repository, vol. xiv. p. 347.

fession at London, Leyden, Paris, and Edinburgh. On his return to his native country, he speedily rose to the highest eminence. As a surgeon, he undoubtedly stood first in this country. In 1768 he was selected to fill the honorable station of professor of surgery in the medical school of New-York, and ranked high as a teacher. The only work of any consequence which he has left us is a volume upon wounds and fractures, published in 1776.* A new edition of this work was printed in 1795, with memoirs of the author, by James Mease, M. D., of Philadelphia. Besides this, there is an interesting paper "On Anthrax," by Dr. Jones, in the first part of vol. i. of the Transactions of the College of Physicians of Philadelphia.

Before closing this account of our colonial medical literature, it would be unjust not to notice the Transactions of a Society, which contributed in no small degree to raise the scientific character of the country. I mean, the American Philosophical Society. The first volume of their proceedings was published anterior to the revolution, and contains some papers on important medical subjects. It may be stated, too, that four American physicians were elected fellows of the Royal Society of London, before the revolution. These were, Drs. Boylston, Mitchell (of Virginia), Garden, and Morgan. Besides these there were ten other Americans who had been raised to the same honor, viz: four of the name of Winthrop, Paul Dudley, President Leverett, Thomas Brattle, Cotton Mather, Benjamin Franklin, and David Rittenhouse.†

No medical journal of any description appears to have been published until after the war of our independence, and the only inaugural dissertation that was published was from the New York college, in 1771, by Samuel Kissam, M. D., on

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* Plain Concise Practical Remarks on the Treatment of Wounds and Fractures; to which is added an Appendix on Camp and Military Hospitals. Principally designed for the use of young military and naval surgeons in North America: by John Jones, M. D., professor of surgery in Kings College, New-York: pp. 114—Philadelphia, 1776.

† Ramsay's America, vol. i. p. 271.

the Anthelmintic Virtue of the *Phaseolus Zuratensis Siliqua Hirsuta*, or Cow-Itch, a copy of which may be seen in the library of the New York Historical Society.

MEDICAL EDUCATION AND INSTITUTIONS.

Under this head may be embraced all those acts and establishments of the colonial governments, whose object was the preservation of the public health, as well as those institutions of a public nature, which originated from the combination of individual enterprise and liberality.

From the commercial character of the country, it may readily be supposed, that our first medical establishments were lazarettos, or hospitals intended for the reception of seamen and others infected with contagious disorders. Accordingly we find a hospital of this description established by Massachusetts, nearly one hundred and fifty years ago, at Rainsford island, in the harbor of Boston. Another was at an early period erected on State island in the Delaware, and appropriated to similar purposes for the port of Philadelphia. After the practice of inoculation had become settled, hospitals were gradually established in different parts of the country, for the purpose of carrying patients through this process. Several of this description were in existence shortly after the middle of the last century. These were, however, entirely the result of private enterprise, without any legislative aid, and were, therefore, only of temporary duration. Among the physicians who devoted themselves to this kind of business, Dr. Barnet of New Jersey seems to have been the most conspicuous. Useful as the foregoing institutions undoubtedly were, they could not have produced any effect of consequence upon the existing state of medical science. In 1750, a project of a higher order was set on foot in Philadelphia; this was the establishment of a hospital, upon the plan and embracing all the advantages of the European hospitals, and the individual with whom it originated was Dr. Thomas Bond. No sooner was the object proposed to the citizens of Philadelphia, than measures were adopted to carry it into execution. For that

purpose, a petition was presented to the Assembly of the colony soliciting the aid of that body, the result of which was a grant of £2000, on condition that an equal sum should be raised by subscription. The proposed amount was speedily raised; and early in the year 1752, patients were admitted into a building which had been procured for their temporary accommodation. The erection of the present building was not commenced until 1755. In the year 1769, a similar project was started in New York, and the credit of first suggesting it is due to the late *Dr. Samuel Bard.* In consequence of a public discourse delivered by him, a general interest was excited in the measure.* The liberal contributions of the governor of the province, (Sir Henry Moore,) the corporation of the city, and the legislature of the province, enabled the governors to commence the erection of the building in 1773. After being nearly completed, it accidentally took fire, and was nearly consumed, in 1775. The present building was not completed until 1791, when it was opened for the reception of patients.† These were all the hospitals that were attempted anterior to the revolution.

Among the most singular features connected with the history of our colonial medicine, is the fact that so little attention

* The agency of Dr. Bard is mentioned in the following terms by Dr. Middleton, in his Discourse delivered 1769. "The necessity and usefulness of a public infirmary, has been so warmly and pathetically set forth in a discourse delivered by Dr. Samuel Bard, at the commencement in May last, that his Excellency Sir Henry Moore immediately set on foot a subscription for that purpose, to which himself and most of the gentlemen present liberally contributed. His Excellency also recommended it, in the most pressing manner, to the Assembly of the province, as an object worthy of their attention; and the corporation of the city have given assurance of granting a very valuable and commodious lot of ground for erecting the building upon; so that there is now almost a certain prospect of this benevolent and humane foundation soon taking place; and as it is to be on the most catholic and unexceptionable plan, it is to be hoped that it will meet with the countenence and encouragement of every compassionate and good member of society, whatever party or denomination he may choose to be distinguished by on other occasions." Note p. 60.

† An account of the New York Hospital, 1811.

was paid to professional education. This is the more remarkable, inasmuch as our colonial ancestors were fully alive to the importance of general instruction, and the most honorable efforts were made to establish it on a respectable foundation. So early as the year 1638, Harvard University, in Massachusetts, was founded. In 1691, William and Mary College, in Virginia; in 1700, Yale College, in Connecticut; and in 1746, Princeton College, in New-Jersey, were severally established; yet in none of them was any provision made for instruction in medical science. With the single exception, too, of New York, already noticed, and that so late as 1760, the law imposed no qualifications upon those who entered the profession, nor were they subjected to any examinations. The education of physicians, therefore, at this period, restricted as it was to the personal instruction of those with whom they studied, must have been limited indeed. The only mode of supplying this deficiency, was by resorting to foreign countries; and it appears that almost all the distinguised physicians who flourished anterior to the revolution, had received their education in Europe. It is a fact certainly highly honorable and worthy of record, that Harvard College no sooner began to send forth her graduates, than some of them found their way to foreign universities, where they obtained the degree of Doctor of Medicine. In 1642, Samuel Bellingham graduated at the first commencement at Harvard, and shortly afterwards obtained a doctor's degree at Leyden. In 1650, John Glover and Leonard Hoar left the college, and were afterwards honored with the doctorate abroad, the former at Aberdeen, the latter at Cambridge in England. Hoar afterwards became president of Harvard college. In 1674, Edmund Davie graduated, and subsequently was made an M.D. at Padua.* As may be supposed, this practice became more and more common, till the period of the revolution; and this, together with the number of foreign physicians of talent and education who emigrated to this country, tended, in no inconsi-

* See the Catalogue of the Graduates of Harvard College.

derable degree, to correct the deficiencies of domestic instruction. The first attempt at establishing a regular system of medical instruction in this country, was not made until a very few years before the revolution; and for this we are indebted to Drs. William Shippen and John Morgan, both natives of Pennsylvania, who projected the plan during the prosecution of their studies abroad. In 1762, Dr. Shippen returned to his native country, and in the year delivered a course of lectures of anatomy to a class of students amounting to twelve in number. These lectures were repeated in 1763 and '64. In the following year Dr. Morgan, who had just returned from Europe, pronounced "A Discourse upon the Institution of Medical Schools in America," before the trustees of the college, in which he proposed a plan for teaching the different branches of medicine, and portrayed with prophetic ardor the blessings which would flow from such a measure. Happily he spoke to a body of men capable of entering into his expanded views; and measures were soon after adopted for forming a medical faculty. Dr. Morgan was appointed Prof. of the theory and practice of medicine, and Dr. Shippen, Prof. of anatomy and surgery. The other stations were not immediately filled. In 1768, Dr. Adam Kuhn, a pupil of Linnæus, who had just returned to his native country, was chosen Prof. of botany and materia medica; and in 1769, Dr. Rush, who had just finished his education at Edinburgh, was chosen to the chemical chair. At the same time, Dr. Thomas Bond gave clinical lectures at the Pennsylvania hospital. Being thus provided with professors on the most important branches of medicine, the school went into complete operation, and the lectures were continued to the year 1775, when they were suspended by the war of the revolution. Dr. Shippen at this time had delivered fourteen courses, and the annual number of students had increased to between thirty and forty.*

New York soon became emulous of the example set her by

* Eulogium on Dr. William Shippen, by Caspar Wistar, M. D. p. 27 1818.

Philadephia, and in 1768 adopted measures for extending similar advantages to medical students. A full medical faculty was regularly organized under the superintendence of the trustees of King's (now Columbia) College, of which Samuel Clossey, M. D. was Prof. of anatomy, John Jones, M. D. Prof. of surgery, Peter Middleton, M. D. Prof. of physiology and pathology, James Smith, M. D. Prof. of chemistry and materia medica, John V. B. Tennent, M. D. Prof. of midwifery, and Samuel Bard, M. D. Prof. of the theory and practice of physic. At the opening of the school, a learned discourse, already noticed, was delivered by Dr. Middleton. A measure so honorable to those immediately concerned in effecting it, and to the city itself, promised not merely to elevate the character of our profession, but to be productive of general good to the community. The fair prospects thus anticipated, were all arrested by the war.

The schools thus started in Philadelphia and New York, were the only ones attempted before the revolution. The first medical degrees were given by the college of New York. In 1769, the degree of *Batchelor* in medicine was conferred upon Samuel Kissam and Robert Tucker. In 1770, the degree of *Doctor* in medicine was conferred upon the last of these gentlemen, and in May of the following year, upon the former. In June, 1771, the degree of Doctor in medicine was conferred on four students, by the Philadelphia college, being the first given by that institution.

With regard to the works that were commonly read and studied, the following is stated by Bartlett. "Though the works of Hippocrates, Galen, Stahl and others, were not unknown, those of Sydenham, and his followers, were principally studied by our oldest practitioners, till the time of Boerhaave, whose invaluable labors commenced in 1701, which, with the commentaries of Van Swieten; the practical writings of Whytt, Mead, Brooks and Huxham; the physiology of Haller; the anatomy of Cowper, Kiel, Douglass, Cheselden, Munro and Winslow; the surgery of Heister, Sharp, Le Dran and Pott; the midwifery of Smellie and Hunter;

and the Materia Medica of Lewis, were in general use at our political separation from the British empire."*

I have now completed the task which I proposed in the commencement of this discourse, which was to give a sketch of the state of medicine during our colonial existence. The revolutionary war succeeded. During that eventful period, our profession stood firm in their country's cause; and the names of Warren,† Mercer‡ and Rush,§ show that they were not idle spectators of the fray. Nothing was done, however, for the advancement of medical science. The newly formed medical colleges were broken up, and all the energies of the country directed to the attainment of a nation's highest hope and ambition. The revolution accomplished, and an independent government established, a new career was commenced. In common with every thing else, medicine felt the sacred impulse, and during the brief period of our independence, how has the scene changed! Instead of the feeble beginnings of one or two institutions, twenty three well established medical colleges are now to be found in different parts of our country; every city has its hospitals; a thriving professional literature has sprung up among us, and we can now

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* A Dissertation on the progress of Medical Science in the Commonwealth of Massachusetts. By Josiah Bartlett. Communications of the Med. Soc'y of Massachusetts, vol. 3, p. 240.

† Major General Joseph Warren was born at Roxbury near Boston, in 1741. He studied medicine and practised his profession at Boston. At the first breaking out of the revolution, he turned his attention to arms, and was slain at the battle of Bunker hill, June, 17, 1775. See Thatcher's Medical Biography.

‡ "Hugh Mercer, M. D. a general in the revolutionary war, was a distinguished physician, who, like Warren, fell in the defence of the liberties of his country. He was a native of Scotland, and educated at Edinburgh. He early emigrated to Virginia, and settled at Fredericksburgh, were he practised medicine for several years with great reputation. During the revolution, he zealously engaged in defence of the liberties of his adopted country, and fell in the battle of Princeton, 1777." Prof. Sewall's Lecture, 1825, p. 60.

§ Dr. Rush was a member of the Congress of 1776, and one of the signers of the declaration of independence.

boast of authors whom we are not ashamed to mention along with those of European birth. What nation ever accomplished so much in an equal space of time, and under equal circumstances ?