

With the Compliments of the
RICHARDSON (T.G.)
ADDRESS

DELIVERED BEFORE THE

AMERICAN MEDICAL ASSOCIATION,

AT ITS

TWENTY-NINTH ANNUAL SESSION,

HELD AT

BUFFALO, N. Y.,

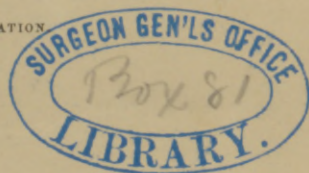
June 4th to 7th, 1878.

BY

T. G. RICHARDSON, M. D.,

OF NEW ORLEANS,

PRESIDENT OF THE ASSOCIATION



EXTRACTED FROM THE

TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION.

PHILADELPHIA:

COLLINS, PRINTER, 705 JAYNE STREET.

1878.

A D D R E S S

DELIVERED BEFORE THE

AMERICAN MEDICAL ASSOCIATION,

AT ITS

TWENTY-NINTH ANNUAL SESSION,

HELD AT

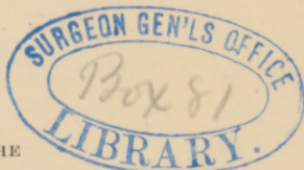
BUFFALO, N. Y.,

June 4th to 7th, 1878.

BY

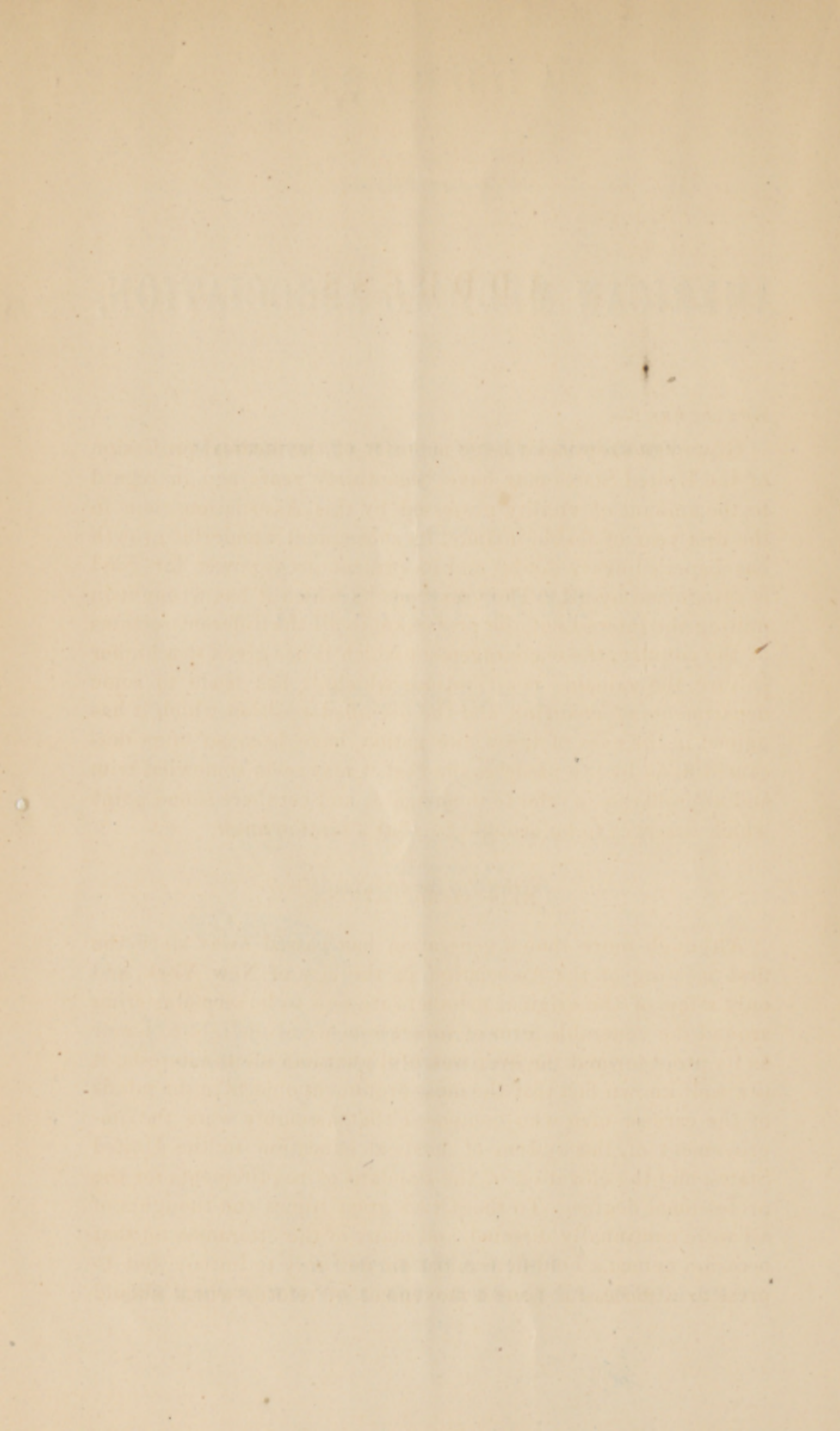
T. G. RICHARDSON, M. D.,

OF NEW ORLEANS,
PRESIDENT OF THE ASSOCIATION.



EXTRACTED FROM THE
TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION.

PHILADELPHIA:
COLLINS, PRINTER, 705 JAYNE STREET.
1878.



A D D R E S S .

GENTLEMEN :—

HOWEVER skeptical a large majority of the medical profession of the United States may have been thirty years ago in regard to the amount of vitality possessed by this Association, then in the first year of feeble infancy, its subsequent wonderful growth has dispelled every doubt, and its present great power for good is recognized by all. The vast benefits which it has wrought in uniting the interests of the profession in all the different sections of the country, the encouragement which it has given to a higher culture, the valuable contributions which it has made to some departments of medicine, and the dignified position which it has gained in the eyes of the whole nation, have been so often descanted upon by my predecessors that it may seem somewhat trite and unprofitable to refer to them again; and yet there is one point which deserves to be brought to your attention anew.

MEDICAL EDUCATION.

Although more than a generation has passed away since the first meeting of the Association in the city of New York, and only a few of the original members are now to be seen clustering around the venerable form of him whom we all delight to honor as its projector and the ever watchful guardian of its interests, it is a well-known fact that the most prominent objects in the minds of the earnest men who composed that assembly were the improvement of the system of medical education in the United States, and the elevation of the standard of requirements for the professional degree. To these two great topics the thoughts of all were continually directed, and many of the utterances on that occasion evince a bold determination not only to initiate, but to press to a successful issue a movement of reform which should

involve every medical institution in the land. It is equally well known that down to within a very few years past all the numerous efforts in this direction seemed to accomplish no permanent good, and the philanthropic and enthusiastic reformers, with the exception of a few hopeful and unconquerable spirits, had come to consider the cause as almost wholly lost. The measures proposed and adopted from time to time were sufficiently incisive, and, to all appearance, admirably adapted to the ends in view; but unfortunately there was no power in the Association to carry them out, and they remained upon the record as mere mementoes of the praiseworthy zeal of their authors.

In view of this discouraging result, a change of tactics was resorted to, and the medical colleges were invoked to correct the evils which were so patent to every one, and for which they were supposed by many to be alone responsible. With what little earnestness and consequently with what little effect these organizations responded to the appeal it is not my present purpose to inquire. I desire, on the contrary, to congratulate the Association upon the evidences which are now developing that its work has not been in vain. It is true that the method of mixed teaching practised by the schools more than half a century ago is still generally followed; but it must be clear to all unprejudiced observers that there is a growing dissatisfaction with the imperfections of this method, and a disposition to adopt the only philosophic plan, known as the graded system, which prevails throughout all the other civilized nations of the world. In proof of this I have only to point to the fact that within the past year the Medical Department of the University of Pennsylvania, the oldest school of medicine in this country, one whose fame has never been eclipsed, following the example of the Chicago Medical College and Harvard Medical School, has changed her ground, and is now fairly on the new road to a still higher position than that which she previously held.

This revolution which is taking place in the minds of medical teachers is, I am inclined to believe, almost entirely due to the public professional opinion which has been originated by the frequent discussions before this body. It is in thus creating and directing professional sentiment that the great power of the Association lies, and I trust therefore that however wearisome this subject may have become to many of you, its agitation may not cease, as it is only in this way that the current of reformation

can be kept in motion. We have only just now found out that the plan which we formerly pursued of making war directly upon the medical colleges, endeavoring to compel them to conform their practices to our theories or else surrender the prerogatives to which they have been so long accustomed, was altogether a mistake, and probably deserved the partial defeat which it encountered. Indeed, I am not quite sure but that the many severe blows which these institutions received at our hands served rather to compact them together, and thus to increase their power of resistance. It is a well-established fact that the walls of old Fort Sumter were by no means impregnable until they had been battered for weeks by the guns of the United States navy, and not until a successful diversion was made against the forces on the main-land were its casemates abandoned. In like manner it is only by capturing the grand army of the profession throughout the country, from which the colleges derive their material and moral support, that we can reasonably hope to bring these institutions to terms. It is by enlightening the minds of the professional public, by developing in those who have passed the novitiate of their studies a desire for something higher and better than can be supplied by the old system, and by awakening in the ranks of the profession a knowledge of the power which they can exert by combination and concert, that we can bring about that change in the requirements for graduation which we all so ardently wish. Let us then use our utmost endeavors to cultivate a spirit of scientific inquiry in the minds not only of physicians but also of the public generally, to arouse the ambition of our routine brethren, to stimulate in the scattered practitioners of the country a sense of their equal responsibility with those of the cities in carrying on the work of progress, and to open up avenues of knowledge to all who may desire to excel. Unless we succeed in elevating the tone and sentiment of the masses of the profession, and enlightening at the same time *the people* in regard to the absolute necessity of protracted study and clinical observation in every one claiming their confidence in his ability to treat disease, we have no right to expect support in our efforts to advance medical teaching and to raise the grade of requirements for the doctorate.

As a means of accomplishing all this it is necessary that there should be a more thorough organization of State, county, and district societies; and I would therefore suggest the adoption of

some uniform plan by which the sixty thousand physicians in this country may be encouraged to unite in local organizations, and through their representatives establish a living connection with this the central legislative body. When in this manner the objects here proposed shall have been effected, no honest faculty will dare confer a diploma upon an unworthy candidate, and no one save an empiric will dare offer himself as a practitioner of medicine without documentary proof that he is grounded in the great principles of medicine, and that he has studied disease by the bedside of the sick under the guidance of competent and conscientious teachers.

ORIGINAL INVESTIGATION.

Notwithstanding the very flattering and eloquent encomiums pronounced by our worthy representatives at the late International Medical Congress in Philadelphia upon American physicians and surgeons, and their very encouraging account of the flourishing state of medical science and art throughout the United States, now that we are alone, and out of hearing of the distinguished foreigners who honored us on that occasion, would it not be well, at least for the sake of some whose consciences are perhaps a little over-sensitive, to confess to one another that "original investigation," in the sense in which the term is strictly used abroad, has not been, and is not now a marked feature in the professional work of this country? Can we not count upon our fingers the names of those who have made undeniable and valuable additions to the common stock of knowledge in any one of the sciences or arts which come within the domain of medical and surgical study? I would not speak disparagingly of the quality, but only of the small quantity of the work which has been done. I am not behind the most ardent in my admiration of the few earnest, persevering, patient investigators of nature who, unaided by national, State, or other public patronage, have labored month after month and year after year in the pursuit of new facts bearing upon the structure, functions, and diseases of the human body, content if they succeeded in adding a single stone to the temple of knowledge. Nor am I ignorant of the fact that through the enlightened liberality of a few remarkable men of wealth, provision has been made for the diffusion of scientific knowledge by publication and otherwise, and, in one

noted instance,¹ for the endowment of a medical school and hospital, in which ample arrangements are to be made for the prosecution of original research. But such men as Smithson and Hopkins and Boylston and Toner are not sufficiently numerous for the wants of our home science. I would inquire therefore whether it is not the duty of this Association to do something more than it has done in the past to foster the spirit of investigation and discovery in those departments which relate directly to medicine.

Two methods of effecting this present themselves to my mind. One is to endeavor to concentrate the influence of the entire profession throughout the country upon the Federal Congress, and to convince its members of the great necessity of taking some steps in order to save the nation from the disgrace which must inevitably attach to her name if she should persistently maintain her present attitude of indifference to work of this kind, and should wilfully keep her eyes closed to the numerous scientific enterprises undertaken by all other enlightened governments. I need scarcely remind you of what Germany and France and England and Austria and even Russia are doing to advance the natural sciences, especially those bearing upon medicine; of the great museums and scientific workshops which they have established; of the liberal rewards which they offer to secure men of first-rate abilities; and of the large sums of money which they annually appropriate for these purposes. They recognize the fact that pure science, while it is a mine of wealth to the state, cannot remunerate the investigator; that it cannot live upon itself; that those who consecrate themselves to the pursuit of it must isolate themselves from the money-getting world around them; must be relieved from all care and anxiety as to their daily bread; and must be supplied with every necessary appliance while with concentrated thought and patient toil they seek to penetrate as it were with a diamond drill the flinty barriers which separate the known from the unknown. This is particularly true of those engaged in biological research, who, while they confer material blessings upon the whole human family, are obliged to depend upon extrinsic aid to enable them to carry on their work.

I am not prepared to propose a plan sufficiently elaborated to

¹ The late Johns Hopkins, of Baltimore.

justify submitting it to the Association with the view of having it brought before the authorities at Washington; yet it seems to me that in the Army Medical Museum and Library the General Government has, unintentionally no doubt, already founded a school which through the influences just indicated, may possibly be made the nucleus of a great national institute in which original research in all the sciences upon which medicine more immediately draws shall be conducted with the same wisdom and efficiency which characterize its present management. Original work of a high order has indeed been already achieved within its walls in the preparation of the "Medical and Surgical History of the War," for which the distinguished authors deserve more than professional honors; and one of the medical officers, Surgeon J. J. Woodward, while off duty, has made valuable additions to physiological and pathological microscopy; but I understand that no provision exists for experimental or abstract research. If the Government could be induced to appropriate even so small a sum as fifteen or twenty thousand dollars annually for this purpose, and to select from its able corps of medical officers competent men who should devote their whole time to the work of investigation, the cause of science would be greatly advanced, and the honor of the country proportionately sustained.

The other method to which I would direct your attention is one which lies exclusively within the scope and ability of this Association, and would, if adopted, in no manner conflict with the one just alluded to. Although the possible results of this method are not to be compared with what might be effected by a great national establishment, it is nevertheless worthy of consideration, on account of its supposed merit and entire feasibility. I proceed to develop it.

According to the "Plan of Organization" of the Association, the Committee on Prize Essays have power "to award two prizes of one hundred dollars each to the two best original communications reported on favorably by them, and directed by the Association to be published." I would ask whether the operation of this by-law after twenty-nine years' existence has proved entirely satisfactory. During this period no award has been made in *thirty-one* instances, mainly in consequence of the want of sufficient merit in the essays presented. Twenty-five papers have been reported upon favorably, for which the Association has paid in prize-money and for publication some eight or ten thousand

dollars. It cannot be denied that many of the accepted essays possess decided literary and scientific value. Some of them, indeed, reflect great honor not only upon their authors, but upon the profession in general. But after all that can be said in their praise, is it not true that a large proportion of them lack that singular quality which should entitle them, when strictly tested, to the designation of original researches, or even contributions to knowledge?

Without pressing this question, I assume that it is the sincere wish of all who feel an interest in the welfare of the Association that as it advances in age and experience it shall progressively improve in the quality of the work which from year to year it presents to the profession as its best production. I am confident that in this respect a change for the better may be made by designating the subjects for competition, requiring strictly original research, and giving more time for preparation. Under the present plan a committee of five members is appointed by the Association from among the physicians of the city in which the next annual meeting is to take place, to whom all competing essays are directed to be sent. As the period within which such papers are admitted extends to the very day of the assembling of the Association, the result is that most of them do not reach the chairman until a week or two, or sometimes a day or two before the meeting. The examination which he and his colleagues can give them is therefore necessarily cursory and unsatisfactory. This is certainly a very serious objection, but a still graver one lies in the fact that in the large majority of cases there is not a single member of the committee who is fully informed upon any one of the topics of which the essays treat. I do not say this to the discredit of any one, but I submit to your judgment whether every city in which the Association has met during the past thirty years is so signally favored as to possess thorough experts in physiology, in therapeutics, in pathology, and in surgery. To remedy these palpable defects, to improve the scientific quality of the articles offered for competition, and to bring these within the field of original investigation, I suggest the following plan:—

1. Offer four annual prizes of not less than two hundred and fifty dollars each, to be awarded at the close of the second year after announcement, for strictly original contributions to medical and surgical progress.

2. Empower the chairman of each of the four sections designated

numerically in the plan of organization as 1st, 2d, 3d, and 5th¹ to appoint annually (and if possible before the adjournment of the session) a committee of three members of acknowledged ability and wisdom who shall, as soon as practicable, select and publicly announce for competitive investigation and report a subject belonging to one or other of the branches included in the title of the section.

3. Let it be also the duty of each of the chairmen mentioned to appoint annually a committee of three experts who shall carefully examine the essays presented, and if any one shall be found worthy of the prize, to recommend its award by the Association.

4. Require all competing essays to be placed in the hands of the chairmen of the respective committees of award on or before the first day of January preceding the meeting at which the prizes are to be announced.

5. All prize essays shall be considered the property of the Association.

6. The names of the competitors shall be kept secret from the committees of examination.

7. Membership upon either of the two committees shall not debar from membership on the other, nor shall membership of the first exclude the member from becoming a competitor.

By some such scheme as this, of which only the salient features have been here presented, there is reason to hope that original investigation may be stimulated, and contributions of a superior character obtained. The objection, which I fancy has already suggested itself to nearly every one who hears my voice, is the want of funds. To this I reply—

1. It can be clearly demonstrated that by the practice of only a very little economy in current expenses there will be an ample balance in the treasury for this and other important measures.

2. It is not very likely that all four of the prizes will be awarded every year.

3. If the receipts from annual assessments should prove inadequate, the rate may be increased to eight or ten dollars, as was proposed at the meeting of 1873.

4. I am quite confident that money will be voluntarily contributed for these and other similar objects, provided the Association shall place itself in a legal attitude to receive and disburse such

¹ 1. Practical Medicine, Materia Medica, and Physiology. 2. Obstetrics and Diseases of Women and Children. 3. Surgery and Anatomy. 5. State Medicine and Public Hygiene.

gifts. Upon this point, which I deem of no small importance, I beg leave to make a few remarks.

So long as the Association remains unincorporated, it is, of course, an organization entirely unknown to the laws of the land. It cannot legally accept or hold property of any sort whatever, and is therefore prohibited from entering into any formal engagement-involving the payment of moneys for any specified object. It has no authority to collect its dues, nor can it be compelled to pay its debts. As it cannot hold property it of course cannot receive bequests, nor even donations with limiting restrictions as to their use. Now I would ask whether it is not within the bounds of reasonable expectation that if this disability should be removed, funds would from time to time be committed by will or otherwise to the Association for immediate use as prizes, or for the endowment of research. I should be greatly disappointed if we should not witness before long the gift of considerable sums of money for specified purposes by persons without as well as within the circle of the profession. This has been the result elsewhere, and there is reason to believe that as the Association shall continue to gain upon the confidence of the people the same will occur here. The large prizes which are yearly offered by the great societies of London and Paris, amounting to many thousands of dollars, are derived mainly from such sources, and I sincerely believe that it has been for want of opportunity that this Society has not been made the recipient of similar gifts.

Moreover, if the Association should be incorporated, and its funds be placed in the control of administrators, would not this insure economy in expenditures, and thus secure not only the insignificant sums proposed for prizes, but enable us to double the same within a very short time?

An act of incorporation can be readily obtained from any one of the States without restricting the Association as to its place of meeting. It will only be necessary that the trustees or administrators shall reside, or at least hold their meetings, within the bounds of the State granting the charter.

STATE MEDICINE.

Undoubtedly the most important question which has ever been considered by this Association is that of State Medicine. Although so frequently the subject of protracted discussions and elaborate reports, it loses nothing of its freshness and interest by repeated

presentation, and will probably continue to claim your serious attention as often as you may assemble together in these annual meetings. It is true that as mere citizens we are not more nearly concerned in the development and application of its great power for good than are all others, for it touches every class and every individual in the community. It is of as much importance to the high as to the low, to the rich as to the poor, to the educated as to the unlettered, and bears with no light pressure upon those who make and those who execute the State and municipal laws. Nevertheless it devolves upon us as philanthropists and the self-constituted instructors of the people in regard to health and disease, to awaken the public mind to the fact that as matters now stand human lives are daily sacrificed at a most fearful rate, and that by concerted and well-directed efforts this sacrifice may be materially arrested. As humanitarians, as moralists, as Christians, we cannot wilfully shut our eyes to the unnecessary sickness, suffering, and death which are taking place around us. We cannot quiet our consciences by *ex cathedra* enunciations of the natural laws by which health may be preserved and the spread of sickness prevented. We must continue in the lead of all public movements directed to this end, and endeavor to draw to our aid all the influence of the people and all the powers of the state. Considerable progress has been already made. Looking cursorily over the whole country evidences of an awakening interest in the cause are visible in every quarter. Ten years ago not a single State board of health existed. Now there are twenty such organizations in operation, collecting facts, distributing information, and urging forward the necessary legislation. Nine of these boards have been created since this Association, by formal action in 1875, made its first appeal to the executive officers of the different States to take action in reference to this matter.¹ Compared with what has been accomplished by

¹ The first "State Board of Health" was established by Massachusetts in 1869; however, Louisiana created a Board of Health for the protection of the State by quarantine in 1855, and extended the power of this Board in 1870.

State Boards of Health in the following nineteen of the thirty-eight States and in the District of Columbia were created at the dates mentioned:—

| | | |
|-----------------------------|----------------------|-----------------------|
| Alabama, 1875. | Kentucky, 1878. | New Jersey, 1877. |
| California, 1870. | Louisiana, 1870. | North Carolina, 1877. |
| Colorado, 1876. | Maryland, 1874. | Tennessee, 1877. |
| Connecticut, 1878. | Massachusetts, 1869. | Rhode Island, 1878. |
| District of Columbia, 1871. | Michigan, 1873. | Virginia, 1871. |
| Georgia, 1875. | Minnesota, 1872. | Wisconsin, 1876. |
| Illinois, 1877. | Mississippi, 1877. | |

other enlightened nations this may appear to some trifling, but nevertheless small as the beginning is, it furnishes fit cause for congratulation, for it is the beginning of hope. No one indeed can read the reports made to the sanitary section of this Association, and the valuable papers contributed to the American Public Health Association, and to some of the State organizations, without feeling a strong desire to take an active part in the great crusade which is now preparing for the recovery of that which to this people is far more holy than any earthly Jerusalem. But let me urge upon each one who proposes to enlist in the service that he first fully satisfy his mind of *the true nature of the work*, and ascertain for himself the best means to be employed under the circumstances which surround him. I fear that the opinions in regard to these matters, held even by a large number of our medical men as well as by the public in general, are rather indefinite and misty, and I beg leave therefore to inquire briefly what is really meant by state medicine in the full acceptation of the term; what is its essential nature; and what are the principal objects which it proposes to the medical profession, to the people, and to the several municipal, State, and federal authorities.

As I understand it, the objects of state medicine are threefold.

1. The prevention or arrest *by official measures* of all diseases which are not in their nature strictly limited to the individual, but which from external causes or from their specific characters have a tendency to spread throughout families, institutions, and communities, and which cannot be otherwise controlled. This is the aim of public hygiene, which is the first grand division of state medicine.

2. The qualification of men by suitable education for the duties involved, not only in the practice of medicine, but also of public hygiene; the state not only directing the studies which they shall follow, but determining by examination when they have reached the standard of acquirement necessary for the performance of their great trusts.

3. The enactment and enforcement by the state of such laws as shall secure to every citizen the benefit of the services of the best professional experts in all questions of a medico-legal character.

In brief, state medicine may be considered to include public hygiene, medical education, and medical jurisprudence, to which

may be added also the establishment, control, and sustentation of public institutions for the sick and the infirm.

If this statement of the subject is a fair one, how vast is its domain; and what a multitude of duties is demanded of those who make it their great pursuit in life! And yet, notwithstanding its extent and the numerous branches into which it naturally divides, it is susceptible of reduction into a complete system in which there shall be no clashing, and each part command the attention which it deserves. This has been already done to some extent in England, where public hygiene at least occupies its true position in the organic law of the land. There the principle is recognized that the private citizen, however humble, is as justly entitled to protection by the state against the public enemies of his health and life as against highway robbery and murder. The same is true of Prussia with reference to medical jurisprudence, where the most obscure plebeian, when brought before a court, can command the ablest counsel in the state upon all questions of a medico-legal character. What has been done in England and Prussia, where political power is concentrated in the hands of a few enlightened statesmen, may not be so fully accomplished here, where federal authority extends but a little way beyond the arena upon which the political relations of the several States are adjusted; nevertheless, by adapting our methods to the peculiarities of our system of government, much more may be realized than at first sight appears probable.

It is of course impossible in a discourse like the present to propose in detail a plan for the elevation of state medicine to its rightful place as an important factor in national legislation. Such discussion is more appropriate to the Section to which this subject is assigned, but I may be allowed to point out the fundamental principles upon which all schemes for this purpose must necessarily rest, at least as far as public hygiene is concerned, and to indicate what seems to me to be the only road upon which we may reasonably hope to make any decided advance.

That the public in general are not only ignorant of hygienic laws, but wilfully indifferent to an acquaintance with them is evident to the most careless observer. We see daily lamentable proofs of the fact, not only in the personal habits, vices, and surroundings of the poor, but also in the dissipations, dress, and dwellings of the rich; not only in ill-ventilated factories, mines, jails, and poor-houses, but in churches, hospitals, hotels, asylums,

and school-houses; not only in the filthy streets and sewers of cities, but in the malarious swamps and stagnant ponds of the country. It is clearly then of the first importance that *the people* who, in this "land of liberty," not only make, but practically execute the laws, should be educated in the elements of physiology and sanitary science to a sufficient extent to enable them to appreciate the necessity of making and enforcing such regulations as are known to promote health in general, and arrest the progress of endemic and epidemic diseases. Properly directed public education is, I insist, essential to public health, and every scheme for the promotion of the latter, which is not founded upon the former, must inevitably fail. This is true, not only with reference to this democratic republic of ours, in which, by a political fiction, every citizen is declared to be a sovereign, but in dear old monarchical England, with its threescore steps between the curbstone and the foot of the throne, where, in a recent address, Professor Tyndall broadly asserts that "if anything is to be done in the way of really great sanitary improvement it must be from the people themselves." But admitting the undeniable necessity of instructing the masses, I ask, in the language of the apostle Paul, "How shall they hear without a preacher, and how shall they preach except they be sent?" Before endeavoring to answer these questions in reference to the subject before us, am I not justified in applying with a single change the ensuing words of this unequalled master to a few who stand here? "How beautiful are the feet of them who preach the gospel of *health* (peace), and bring glad tidings of good things!"

It is a trite theory that knowledge penetrates society from above; that starting from the limited mountain-top occupied by the educated few it slowly percolates through the subjacent strata, and after a while perhaps, in a greatly diluted state, it reaches the minds of the many who form the lowest stratum. I admit the truth of the illustration in so far as it expresses the direction which knowledge takes, but I deny the inference that the latter descends by its own weight; that those who possess it have only to open their mouths and their words shall, by their specific gravity, filter through all intervening grades, and refresh the thirsty souls of those who are at the bottom. This is certainly a very comfortable doctrine for those who live nearest the heavens, but unfortunately it is not true. Knowledge "abides

alone," unless it be forced into the ranks below, and it is the bounden duty of those who possess it to make provision for its diffusion. "No man liveth to himself alone," and the author of all truth has pronounced dire maledictions against those who hold the key of knowledge and refuse to open the door to those who are without. Sanitary science is no exception to the rule. It must be taught in the family, in the infant school, in the academy; taught in the workshop, in the factory, in the church; taught in the university, in the forum, in the legislative halls; taught in the city, taught in the country, taught everywhere. We have our Bowditches and Shattucks and Bakers and Cabells and others of like wisdom and zeal to direct the great work, but we need missionaries and *colporteurs* who will go into the streets and byways and proclaim the truths of the new way, persuading all who will listen that health and long life are possible to multitudes of those who now sicken and die before they attain the age of maturity. And whence are these teachers to come? I answer that, for the present at least, they are to be furnished chiefly by the medical profession. Indeed every physician should be a worshipper at the shrine of rosy-cheeked Hygeia, the daughter of his old god Esculapius, and should exert his utmost influence to spread abroad the knowledge of the elementary truths which underlie the whole system of sanitation. By so doing we will prepare the way for the enactment and execution of sanitary laws.

Hand in hand with the physician should be seen the minister of the Christian religion, who, like the former, is brought by his calling into closest relations with all grades of society, and thus far is equally fitted to become a messenger of health not only to those who belong to his pastoral charge, but to all who come within the circle of his personal influence. I do not know what the theological seminaries are doing with this question; but I do know that the oldest system of public hygiene of which we have any record was formulated and enforced by Moses, the divinely appointed head of the church under the old dispensation, and the type of Him who sixteen hundred years afterwards assumed in person the leadership for all time to come. If that great religious teacher in those far away times considered it his duty to protect the members of his flock from preventable diseases by enacting wise sanitary regulations, it seems to me that his successors, although not possessed of his extraordinary authority, might at

least preach the doctrine and endeavor to practise it. If consulted by them, I should therefore certainly advise that as a preparation for engaging in the duties of the pastor the theological student should pursue a course of study in sanitary science as a means of doing much good in a moral as well as in a material sense.

But to return to the main question: I would call your attention to the fact that a very large proportion of the members of our profession, all of whom should be teachers of the laws of health, need themselves to be taught, they having never given the subject sufficient systematic study to enable them to speak with authority upon any of its most important points. If we turn to the medical schools we find some explanation of this state of ignorance in the fact that very few of these institutions mention it in their prospectuses, and only two or three have a special professor of state medicine in their faculties. It is true that in all the schools the professors of physiology necessarily teach the fundamental laws of personal health; but far more than this is required to enable the student to comprehend even the outlines of the study. Trusting that the medical colleges may soon correct this serious defect in their system, we are still confronted by the question, what is to be done toward enlightening the tens of thousands now engaged in the practice of medicine all over the land who have received no such instruction, and are not fully aware of the important bearing of the subject upon the welfare and prosperity of the nation. What can this Association do more than it has done with reference to this point? The question is one which demands the most serious consideration, and I confess to you that I approach it with no little diffidence, not only on account of its great importance but of the difficulties by which it is beset. The subject presents itself, however, to my mind somewhat after the following manner: A comparatively small number of philanthropic gentlemen, most of them physicians, imbued with a deep sense of the inestimable value of systematic hygiene for the prevention and arrest of disease, have by protracted study and investigation become possessed of certain information which if generally known and acted upon would not only save the lives of nearly one-half of those who now die before middle age, but also prevent a vast amount of sickness, and greatly promote the well-being and good morals of society at large. These learned and noble-hearted persons desire to impart their knowledge to their professional bre-

thren and others through whom it may be distributed broadcast over every State in the Union. Their first difficulty is to reach the ear of the professional public, and the second is to convince their hearers of the great importance of their message. If the grand army of physicians scattered over our immense territory could by means of the telephone or otherwise be brought within hearing and persuaded to listen attentively for an hour or more to the spoken words of one or other of the masters referred to, the first part of the problem would be solved, and possibly the second also. In a very little while the seed thus sown would germinate and bring forth fruit for the saving of human life, some thirty, some fifty, and some a hundred fold. But as this method is impracticable, at least in the present state of physical science, may not the end in view be otherwise attained? There is but one other way that I know of, and that is for this Association to speak, and by means of the press and the post send its words to every physician in the land. I suggest, therefore, that a special committee of leading sanitarians be appointed to prepare a somewhat elaborate address to the profession and the public setting forth the transcendent importance of the subject, presenting a summary of sanitary science, pointing out the best methods of studying and teaching the same, and demonstrating the great benefits to be derived therefrom by the individual and the community in general. Without attempting to portray the special features that should appear in such an address, I take the liberty of saying that it should not omit to insist upon the great necessity of teaching the young not only the laws of health, but the elements of physiology which are essential to a proper comprehension of the principles of hygiene. In my opinion such instruction cannot be commenced too early in life, and should progress *pari passu* with that in geography, grammar, and history, so that a boy or girl ten years old should feel as much disgraced by ignorance of the principal organs of the body and their functions, as by ignorance of the differences between an island and a lake, or a mountain and a valley. I am not unaware of the serious difficulties to be encountered in the attempt to introduce these studies into schools for the young, of the objections arising from want of competent instructors, and of the strong repugnance which many parents feel at the bare thought of instilling such knowledge into the minds of their children. The last was brought home to me most forcibly not long ago when a gentleman of

average common sense and good position in society, withdrew his daughter, a girl of twelve or fourteen years of age, from a first-class school with which I am acquainted, because a human skeleton was brought into the class-room by a well-known professor of physiology who had kindly volunteered to teach the pupils a few facts in regard to respiration and circulation. But I am sure that by the publication of facts, and by patience and perseverance on the part of medical men all this sort of opposition will be overcome, and that before another generation shall grow up into manhood and womanhood no school or seminary will be considered complete in its appointments without a special teacher of sanitary science.

Such an address as I have in view might possibly be compressed into sixty or eighty pages. Twenty or thirty thousand copies divided among the State medical societies, with instructions to distribute them throughout every county, would prove of incalculable benefit to the great cause which we are endeavoring to promote.

Following immediately in the path of and acting as a supporting column to the professional army engaged in overcoming the numerous obstacles which society presents at every step should be found the State and municipal authorities occupying every foot of ground that is thus gained, and placing it under suitable sanitary laws. This seems to be the way in which all the great movements of civilization progress toward a successful issue; nevertheless, it has been proposed by some of the wisest members of this Association not to wait the necessarily slow march of sanitary intelligence among the people, but to petition the Federal Legislature at once to create a Sanitary Department of the general government, with an officer at its head, who shall be the peer of the Secretaries of State, War, and Finance, and be assisted in the performance of his duties by a National Council of Health, composed of members from every State in the Union. However startling such a proposition may have appeared to the politicians at Washington and to a very large proportion of the medical profession who are not yet quite educated up to this point, emanating as it does from such a well-known master in state medicine as my distinguished predecessor in this chair, and advocated by so many others whose opinions in such matters are worthy of the highest consideration, I commend the question to your serious attention. I do not propose to discuss the subject here

further than to say that nearly all the plans suggested for securing federal control of public hygiene seem to me to be constructed too much upon European models, and are therefore not easily adapted to our democratic-republican system of government. To my mind there are but two great questions in state medicine which we can reasonably hope to have solved by federal legislation. One concerns sea-board quarantine and the other the pollution of water-courses. It is doubted by many eminent statesmen whether even these can be brought under federal control, and yet the recent passage by Congress of "An act to prevent the introduction of contagious and infectious diseases into the United States," encourages us to hope that something may be expected from that quarter. It is true that the act referred to mainly contemplates giving assistance to the quarantine authorities of the sea-board States, but it also provides for the establishment of quarantine stations where none exist, but where in the opinion of the Secretary of the Treasury it shall be deemed necessary, provided there shall be no interference with State laws and regulations in regard to such matters. The assumption by Congress of the authority to enforce such laws under any circumstances is a most important and significant movement in the direction of a general sea board quarantine. If the federal government has the right to establish such stations within the bounds of any State, she undoubtedly has the right to do the same in all, and let us therefore hope that it will not be long before she shall extend her jurisdiction, so far at least as preventive medicine is concerned, along the entire coast from Maine to Texas. The abuses of the present system of quarantine of separate States, arising mainly from the fact that its officers are for the most part appointed from political considerations, and with no reference to their fitness or unfitness for the positions, are so flagrant as to demand the attention, and if possible the redress of the central government. The Forty-fifth Congress therefore deserves the sincere thanks of the medical profession throughout the Union, and especially of this Association, for this its first formal acknowledgment of State medicine since 1799, thanks to which might well be added without detraction the earnest expression of the hope that still larger powers of the same nature may be granted to the Secretary of the Treasury, and through him to the Surgeon-General of the Marine Hospital Service. The inauguration of a uniform sanitary police, with reference to

maritime commerce, would be hailed with delight by all the citizens of the coast States, save and alone by individuals who are politically and pecuniarily interested in perpetuating the present unequal and unjust system. It would not only protect the people from the impositions already referred to, but would relieve them from an onerous tax from which there seems to be otherwise no escape.

Whatever doubts there may be as to the extent of the authority possessed by the central government, there seems to be no dispute that within the limits of each separate State resides a power which with reference to all such matters is practically supreme. It is to this power represented by the Legislature and Executive of each State that we must look for the enactment and enforcement of such laws as state medicine demands of a wise government, economical not less of the lives and health of its citizens than of its material resources. It is therefore upon this power that the State medical societies should concentrate all their influence, professional and social, to effect the necessary legislation. They should employ their best endeavors to have State boards of health created where these do not exist, and they should by all means secure the right of nomination for appointment upon such boards; otherwise positions which demand men of peculiar qualifications and sterling integrity will be conferred, as is too often the case, upon mere office hunters, who have no interest whatever in the matter beyond its pecuniary return. In this connection I would call special attention to the plan adopted by the State of Alabama, where the State Medical Association has been constituted the State Board of Health, and the county societies subordinate local boards, with powers to select all the officers necessary to carry on the work, including that of quarantine. Whatever plan, however, these societies may adopt let them bear in mind, in recommending legislation, that while it is true that a people ignorant of even the elements of hygiene cannot be brought under sanitary regulations except by restraint, such restraint should be used with the greatest caution and moderation, and be sustained by an appeal to the common reason of those to whom it is applied. I therefore repeat, with added emphasis, the sentiment already expressed, that *the hope of true progress in state medicine lies in the education of the people.*

