the national society, because, while we could not legislate against or indorse any college or set of colleges, we could require each applicant for membership to be a graduate of a college that required a four years' course, or to conform to some similar standard. If laws were needed to regulate the practice of medicine, we should be in a position to secure uniformity throughout the entire country.

It would not be long before the public would understand that to be a "Fellow of the AMERICAN MEDICAL ASSOCIATION" was a certificate of such professional ability as would enable its possessor to grapple with any disease, however intricate, or to meet any emergency, however sudden. That its holder was a gentleman in his professional life, and one who would be a reliable guide in all matters pertaining to the physical well-being of his patients.

Thus would the science of medicine be continually advanced, not only in the estimation of the public, but, what is far more important, in the estimation of the members of the profession. There would be an incentive to honest effort toward professional growth and toward honorable professional intercourse.

The acquisition of wealth would not be placed far above all other motives. Honor and honesty would co-exist with a desire for an advancing reputation in the professional world and the science of medicine would attain the position to which it is entitled.

THE NATION'S SIN OF OMISSION.

Read before the Texas State Medical Association at Austin, April, 1894.

BY T. J. BENNETT, M.D.

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CHAIRMAN SECTION ON STATE MEDICINE AND PUBLIC HYGIENE.

The Constitution of the United States guarantees to every citizen life, liberty and the pursuit of happiness. The laws of the country have been framed by wise men, after careful study and observation, looking to these ends; and, in a sense, every enlightened government is "paternal." It is jealous of any infringement of these rights, and the humblest citizen can claim, and through the courts receive, protection in his life, liberty and property; and any trespasser upon either is swiftly punished. The arbitrary arrest, in a foreign country, of the humblest person claiming protection of the stars and stripes, is resented, his liberty secured, and restitution demanded, and the demand is backed, if need be, by the whole military and naval power of the country.

The laws in respect to life and liberty, and in regard to peaceful possession of one's own, and the enjoyment of the fruits of his labor, have been amended and made better, as time and experience have revealed defects, and as changed conditions have made necessary.

The laws with regard to special privileges are framed with an eye to the protection of the life, liberty and property of others, and of society generally. No man is permitted to conduct a business the nature of which threatens society with danger; such, for instance, as the running of railroad trains and steamboats, and the operation of factories, mills and shops; and such conditions are attached to the privilege, when granted, as to reduce the danger to others to the minimum.

In return for this protection and paternal guardianship, the citizen is taxed to carry on the operations of the machinery of government, and certain duties are

required of him, all of which are duly specified, and made compulsory, under a penalty for neglect, failure or refusal to perform them. He shall serve on the jury, do certain road work and, in time of war, shall bear arms in defense of the country; or he may be impressed by any sheriff to put down any local lawlessness. He is taxed, moreover, for the support of the defectives, and for schools and poorhouses.

As civilization has advanced, and experience demonstrated the necessity, laws have been enacted which throw every protection around one's live stock. His cattle are protected from infectious diseases by expensive quarantine, if need be; and, especially in Texas, the theft of cattle, a horse, more particularly, is a most heinous crime.

But with regard to the *health of the citizen*, there is, in Texas and some other States, a woeful lack of either solicitude or legislation. The most ignorant man is permitted the dangerous privilege of practicing medicine, without a restricting clause in the law. He is licensed by the possession of a diploma alone (it may be stolen or purchased) which, according to Webster, is only a certificate, or "evidence of a degree having been conferred," and "conveys no rights or privileges whatever," to enter the community, to invade the family of his confiding dupes, and take in hand the life of any member; to prescribe the most deadly drugs—of the properties of which he may be entirely ignorant—and, by his ignorance, kill with impunity. He can set aside the law in regard to the sale of liquor on certain days and, by a prescription, can accommodate any old toper with the stuff he craves. Moreover, by virtue of his calling, he is exempt from certain duties to the State or county which other citizens have to perform. In short, the quack doctor (with or without a diploma) is one of the many and grave dangers that threaten society; and in this State protection has, so far, been prayed for in vain; the bugaboo of "personal rights" is pleaded, and the individual's alleged "rights" to practice medicine are respected, often to the great detriment of society. The citizen *has a right* to protection against this, as all other dangers—purchased by his taxes—and his support of the government and his obedience to the law.

Enlightened governments become enlightened through observation and experience; and, as we have shown, our laws are amended, and jurisprudence, in every respect (except medicine), has developed *pari passu* with the progress made in the many relations of life and business.

The existence of a soul in man is said to be evidenced by the possession of the faculty of reason, and this faculty alone distinguishes man from the lower animals; the power to reason, philosophers say, is evidenced by the ability to *profit by experience*; and no race or people is thought to be capable of self-government who do not so profit. Estimated by that test our boasted civilization is a myth, and our government unreasoning and unreasonable; for it is evident to the most casual observer that it has failed to profit by past experience in dealing with one of the most vital and essential elements of danger, to-wit: Disease. True, quarantine has been improved year after year, as experience has revealed defects and the necessity for additional requirements or changes, until it is now reduced to a rational system, and is almost perfect. But, while we would not be thought to underestimate the value and im-

portance of quarantine as against the invasion of foreign disease, we will aim to show that by attention to this feature of protection alone, to the neglect of internal sanitation, the Government, to use a homely expression, is "saving at the spigot and losing at the bung." The lives lost, the time lost, and the property values destroyed in time of the most destructive epidemic, are as a drop in the bucket to the lives, labor and property being destroyed every day, all over the country, by diseases *easily preventable*; and it is not, by any means, through ignorance of their nature and cause and the mode of prevention that this loss occurs, but by the apathy, indifference, neglect, failure—call it what you will—of the general and State governments to take hold of the subject, and, profiting by the experience and wisdom of the medical profession, apply the law to the eradication and prevention of the local and internal diseases, to amend the laws in accordance with the discoveries and recommendations of the medical profession; in short, to avail of the benefits and apply the principles of State medicine.

Society has the right to protection from typhoid fever, consumption and diphtheria, as well as from yellow fever and cholera, or other danger of whatever kind; and it is clearly the duty of the Government to secure it.

Recognizing, then, the fact that thousands of lives are annually lost through the agency of preventable diseases; recognizing that the general Government has failed so far, to secure to society the protection to which every citizen is entitled, it is pertinent to inquire as to this grave omission.

In view of our civilization, the intelligent zeal with which laws have been framed for all other requirements of the citizen, whenever experience has shown what was best; the solicitude manifested for the safety of the poorest citizen, if in trouble abroad, it can hardly be said that it is either ignorance or indifference, on the part of the lawmakers, that causes this sad lack of legislation, and the consequent great danger that threatens the public health. Our Congressmen, beyond doubt, have an intelligent appreciation of the maxim, "Public Health is Public Wealth," and of the importance of health to the happiness and prosperity of our country. What, then, is the reason that in so many States no safeguard is thrown around that which is so essential to all other rights of the citizen—the possession of health? Why has not the general government profited by the experience of sanitarians everywhere; utilized their observations and researches in the bacteriological laboratory and at the bedside, and the results of experiments shown in abating disease by cutting off a vitiated water supply, for instance?

The question is easily answered: It is because there is no *organization* in the medical ranks—no coöperation between medicine and law; because there is no *head* to direct the vast energy of sanitarians and laboratory investigators, which, being expended spasmodically and individually accomplishes nothing; no one to direct how the accumulated knowledge of medical and sanitary science may be utilized; no department devoted to this paramount interest, whence such information can be procured as will enable Congress to frame laws which shall constitute an intelligent application of means to ends—the adaptation of the principles of State Medicine.

Individual effort counts for nothing. We have, all over the land, the most intelligent and indefatigable workers in biological research, and in every field of medical and sanitary investigation. They find that certain deadly diseases are caused by the presence of a bacillus or its products, and they discover also its antidote. The knowledge that hydrophobia is caused by a poison in the salivary gland of a dog or other animal; the knowledge that, to date, no antidote has been revealed to science—that she has no remedy even to palliate the dreadful sufferings of one inoculated with this poison—had as well never been acquired, so far as any protection is afforded by law against this great danger. The same may be said with regard to many other sources of danger; no protection is afforded by law against polluted water, nor against diseased meat, or decaying fruit and vegetables on sale at every stall in most cities. The medical profession is like an army of brave and capable men without a leader; each man is waging war upon his own hook against the invisible hosts of earth, air and water, and each cries out singly for help from the strong arm of the law.

Were the statistics compiled by the State Boards of Health, showing the fearful mortality from preventable diseases, and the results that have followed even spasmodic efforts at sanitary reform, brought to the attention of Congress by the united medical profession, it is not to be doubted that they would be convinced, and speedily enact such laws as would enforce sanitary reform everywhere. But, unfortunately, the profession is divided; and each section represents to Congress a different course with reference to meeting the trouble. And Congress, for want of intelligent advice, really does not know what is best to be done.

As the AMERICAN MEDICAL ASSOCIATION comes nearer being a representative organization, reflecting the consensus of medical opinion, than any other in this country, the bill formulated by their committee and now before Congress should be regarded as being the first step in the sanitary reform needed.

In this connection the movement is of vast importance. Indeed, it is the most important matter now engaging the attention of the medical profession. In that bill the many sources of danger are pointed out, and suggestions are made for compilation of such statistics and the gathering of such information generally, into one office, as will enable the Secretary to give to Congress the exact data upon which to frame laws to meet every requirement.

Certain States have been pioneers in this great work, and, listening to the suggestions of their sanitarians, they have enacted laws which, in a short time, have reduced the mortality of certain diseases 50 to 100 per cent. Illinois, Ohio, Michigan, Massachusetts, and other States, may be mentioned as setting a praiseworthy example. In Illinois, Dr. John H. Rauch,—the Farr of America, peace to his ashes,—did more for sanitation and the advancement of preventive medicine than any man living or dead. That State should erect to his memory a monument that will pierce the clouds, and in letters of living light inscribe upon it, "*Benefactor*." The condition of affairs sanitary in Illinois before and after Rauch's measures of reform were inaugurated, will serve as an illustration of what may be done by legislation based upon sanitary and medical knowledge.

The saving to the State by the wisdom of that one man, and the energetic and younger men who succeeded him and still further carried out the inspirations of his genius, if estimated in money would pay the national debt, or the expenses of his Government ten years, and yet—that is only one State. We will confine ourselves to Chicago, and briefly point out the results in the city alone, since the inauguration of the World's Fair. For the purpose, we avail ourselves of an admirable paper in the *Independent*, entitled,

SOME SANITARY GAINS.

"In 1891, in Chicago, there was an average daily mortality from typhoid fever of 5.4, chiefly young lives. There was a betterment in 1892, as a result of some sanitary attempts as to water supply and sewerage.

" At one time in 1891 the percentage of typhoid fever deaths was 16.6 in 10,000, making a total of 1,997; only three short of 2,000, and each death is justly presumed to represent ten cases which recover.

" Nobody doubted that the cause of the trouble was a polluted water supply. . . . Matters had considerably mended in 1892, but then the mortality was equal to that of Philadelphia in the Centennial year.

"It will perhaps present a more striking picture if we say that in January, 1892, there were 311 deaths from typhoid fever in Chicago, while in the much more compact city of Brooklyn there were only 8. In May, 1891, half as many people died as in the whole of Massachusetts during the entire year. Such was the condition before the beginning of the World's Fair project, and people were afraid to go there. Sanitary measures were inaugurated. To be brief, a canal four miles in length was cut, which disposed of the sewage, and pure water was conducted to the city from a distance of twenty-five miles. Crematories for the disposal of garbage were introduced, and from being a city of naturally unhygienic surroundings, situated on the borders of a great marsh and lake, where sanitary engineering was not only difficult but very expensive, and having consequently a heavy death rate, Chicago has become, while not a sanitary model, a standard for comparison with older and less densely and more favorably located cities, like Baltimore and Philadelphia, the mortality from typhoid fever having fallen from 311 deaths in January to 47 in December. And this was accomplished by laws in accordance with suggestions of the State Board of Health, based upon statistics compiled by the Board, and other sanitary knowledge, the result of individual experiment and research; an example of how medical knowledge can be applied by the State for the protection of the public health.

Should Congress create a Department of Public Health in accordance with the petition of the AMERICAN MEDICAL ASSOCIATION, it will be the first and most important step in the direction of remedying the great evil complained of,—the unnecessary deaths of so many thousand people. In the Committee's memorial to Congress, the duties of the Secretary of the Department are suggested, and they cover every phase of sanitation, comprehend every subject that has a bearing upon the public health. When a head shall have been created and the department organized, all the discoveries of individual workers, all the statistics collected by State and local boards of health

will be focused there, collected and classified, and thus will be made evident what laws are necessary. The results of such compilation would be most astounding.

To give an illustration, even on a small scale, of the immense losses being sustained, we will take the deaths from preventable diseases in only one or two cities, and estimate in dollars and cents the value of the lives and time lost.

In the *Scientific American* is published, under the head of "Sanitary Negligence," a table showing the mortality of a number of cities in America and Europe (prepared by the Secretary of the Maryland Board of Health). From this table we take the following as illustrating the difference in mortality of the principal American cities.

The annual death rate per 1,000 inhabitants is as follows:

New York.	26.47
Brooklyn	21.84
Chicago.	18.95
Boston	23.88
Philadelphia	21.95
St. Louis	18.47
Baltimore.	21.10
San Francisco.	18.21
Cincinnati	19.67
Cleveland.	18.19
Buffalo	16.28
New Orleans	28.72
Milwaukee	16.00
Minneapolis.	9.60
St. Paul.	9.61

The writer of the article says: "There is no more accurate gauge of civilization actually attained by cities than their comparative mortality tables. It is the object not only of medicine to save and lengthen human life, but it is (ought to be, but apparently it is not,) also the supreme object of the entire governmental and social mechanism." "In a general way, the higher the death rate, the greater the indifference to hygienic conditions of life." "There is no reason, except a disgraceful reason, why New York should allow a death rate of 7.36 higher than that of London, (19.11). This means that New York permits the unnecessary death of 6,630 of her citizens every year." "With a difference of death rate between New York and Brooklyn, just across the river, of 4.63, New York is criminally chargeable with 4,171 additional and unnecessary deaths every year. As compared with Philadelphia there are 4,071 more deaths to her debit. And as compared with Chicago, the appalling number of 6,774. There is certainly no good reason why the mortality of Philadelphia and of Boston should be higher than that of Chicago; but the table shows that Philadelphia kills, proportionately, 1,673, and Boston 1,200 more of her citizens each year than the city that is accredited with drinking her own diluted sewage. It is plain that something is radically wrong."

And these comparisons were made, it seems, even before the great source of typhoid fever,—the polluted water of Lake Michigan,—was abandoned and the introduction of pure water from a distance; the disparity in mortality as compared with these same cities must be still greater in future.

The excess of deaths in five cities over the deaths in Chicago foots up as follows:

Boston as compared with Chicago	1,200
Philadelphia	1,673
New York	6,774
Brooklyn	1,413
Baltimore	490

Total 11,550

"This," says the writer quoted, "is the cost of criminal negligence of known laws of health in only five of our cities. If London cared as little for the lives of her citizens as New York seems to care for hers, there would die in that city every year 21,556 people more than at present die." The money value of the lives lost in those five cities alone, as figured by the statistician quoted, is over forty-six millions of dollars; while the time lost by others sick, *i.e.*, according to Farr, there are two years of sickness to every annual death, or in this instance (11,556 deaths) 23,110 years of needless sickness, which, estimated in money values means, for lost time alone, \$6,930,000 besides bills for the doctors, nurses, druggists and all other expenses. "And yet," says the writer, "when the city fathers are asked for a few thousand dollars for meat inspection, for new and necessary sewers, for an unpolluted water supply, or for any other measures of preventive medicine, the request is refused, or acceded to with such cringing stinginess as to be ludicrously inadequate." "In only five cities, and estimated in crude financial losses, we have seen there is a squandering of some fifty-three millions of dollars. Extend the calculation,—easily made,—to the whole country, and it is recognized that we are wasting several hundred million dollars worth of human lives each year, by our recklessness and our stupidity. The medical profession heroically works to save a few thousand sick, while the community goes on blunderingly and savagely killing and making sick by the million."

Our writer is wrong,—as we have attempted to show—to attribute this fearful mortality to either ignorance, or stupidity, or parsimony, so far as the Government is concerned. It is a national sin not to lower the death rate all over the United States; but it is a sin of omission in the failure to apply the vast concrete knowledge obtained by medical and sanitary science to the prevention of disease,—in accordance with the clearest dictates of humanity, reason, justice and common sense. But this the general government can not do, or be made to see the necessity for doing, until provision has been made for collecting, compiling and classifying this knowledge, and there is brought to its attention the cost in dollars and cents, of sanitary neglect; till the deaths all over the United States from preventable disease are consolidated, and it can be shown how much in money can be saved to the Government by the passage of laws to apply the remedy pointed out by sanitary science. Until the Government recognizes the great necessity here attempted to be shown for the creation of a Department of Public Health, and creates it, and puts it into operation, it must stand chargeable with criminal neglect, and held responsible for this fearful waste of human life.

The annual meeting of the New York State Board of Health was held May 3. Dr. Florence O'Donohue was re-elected President, and Dr. J. T. Barnes, of Albany, was elected Secretary of the Board, *vice* Dr. M. Barnes resigned.

ORIGINAL ARTICLES.

A NEW METHOD OF VALVULAR GASTROSTOMY WITH A MUCOUS MEMBRANE LINING.

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The older methods of making a stomach fistula for feeding, in case of impassable stricture of the esophagus, seldom proves satisfactory. Food is easily introduced and digested, but can not be forced through the pylorus into the intestine, because at every contraction of the stomach for that purpose most of the contents are forced out through the fistula. Thus the food is lost, and many of the patients die of starvation. A mechanical rubber valve which we invented in one case partly overcame the difficulty, but did not permanently save the patient.

Wetzel devised the following method: A small opening being made into the stomach, a rubber tube was inserted, and the outer portion of the tube laid along the external surface of the viscus, the stomach wall was folded over it for one and one-half inches and fastened with Lembert stitches, taking up only the peritoneal and muscular coats. The outer end of the new canal was stitched to the skin. The fistula thus formed resembled the ureter where it enters the bladder, and being thus valvular prevented leakage. A difficulty, however, arose. The new canal was lined with peritoneum and not with mucous membrane. It threw out granulations, and could only be kept from closing up by constantly wearing the tube.

Kocher, of Berne, modifying a plan of Alberti's, proceeds as follows: He draws about four inches of the stomach out of the abdominal wound, and stitches up the latter except about two inches. Then the surface of the protruded stomach-pouch is stitched to the wound. Next, he begins at the upper end of the wound and forcibly makes a channel between the superficial fascia and the muscle, etc., carrying the channel up outside the cartilage of the seventh rib, and onward to the sixth rib. Here he cuts an orifice through the skin. He then seizes the projecting stomach-pouch, forces it up through the new channel, and brings the tip out at the orifice on the sixth rib. Here it is opened and stitched to the wound in the integument. The bulging cartilage of the seventh rib acts to compress the pouch, and is said to prevent leakage. It seems like rough treatment of a delicate organ, but there has not yet been enough experience to decide the question of its usefulness.

In a recent case of esophageal stenosis we first tried the plan of opening the stomach with retrograde dilatation of the stricture of the esophagus, closing the stomach wound and returning the viscus. This restored the power of swallowing for a time, but the stricture again contracted, and shut off nutrition. Next we tried Wetzel's plan with perfect success, but for reasons above stated, the tube must be constantly worn.

After considerable experiment on cadavers and animals, we find the following operation feasible, and as it furnishes a valvular orifice lined with mucous membrane, a tube will only need to be used occasionally to prevent possible contraction at the orifices: