Addresses.

THE LEGISLATIVE CONTROL OF MEDICAL PRACTICE.[1]

BY REGINALD H. FITZ, M.D., BOSTON.

MR. PRESIDENT AND FELLOWS OF THE MASSACHUSETTS MEDICAL SOCIETY: — With the advancement of learning, and the progress of civilization, it has been found necessary for those in authority to exercise more and more control and restraint upon such as are engaged in the practice of medicine.

As it became evident that the name of physician or surgeon was offered in excuse for the grossest ignorance or neglect, or to incite the actual destruction of human life, laws were passed to aid the victim of malpractice, and to punish the criminal abortionist.

When it appeared that sane persons were sometimes, and perhaps for the worst of motives, placed under restraint, justified only in the case of lunatics, a physician's certificate became necessary for the commitment of the insane.

The public has learned that the surest way of controlling the ravages of contagious disease is by the isolation of the earliest cases, and that for the protection of the well, even arbitrary measures of isolation may be found necessary. It, therefore, makes it the duty of the physician to notify immediately the proper authorities when he knows that he has seen a case of cholera or small-pox, diphtheria or scarlet fever, that the community may rest assured that suitable measures are being taken to protect the healthy. Elaborate and costly quarantine methods, useless without the services of intelligent, skilful and especially trained physicians, are established for the same purpose. In addition, vaccination, compulsory if need be, must be guaranteed by the physician to promote the same object.

He must make a return of the birth at which he assists, and must furnish a certificate of the cause of death. When there is reason to suppose that the latter has occurred under suspicious circumstances, the community orders that these shall be satisfactorily investigated by physicians of its own choice, if it sees fit.

The people thus demand, and submit with more or less eagerness or readiness to certain attempts at regulating the practice of medicine. They admit the necessity of the control, and they require qualifications, which only combined intelligence, education and honesty can provide. They seek for them in physicians, and expect the latter to possess them.

It is well recognized among those possessing the best opportunities for judging that patients are at times treated with reckless ignorance or negligence, and die in consequence; but no verdict of homicide is rendered. Ignorant and unskilful persons have often assumed to treat patients in a medical way, have caused injury, and have not suffered civil damages. Equally ignorant and unskilful pretenders to practice do not know the symptoms of contagious disease, do not suspect its presence, make no report to the proper authorities, suggest no isolation, and are the direct cause of the spread of diphtheria, of scarlet fever and the like from house to house and from district to district. The physician's record of the cause of death not infrequently conceals criminal abortion, sometimes manslaughter, and is often indicative of such ignorance as to be wholly worthless.

Nowhere in the Union is the possibility of these evils greater than in Massachusetts. In this State any one who chooses may practise medicine. He has but to announce himself a physician and he becomes one. He may assume a title to which he has no claim, and may place a forged certificate upon his walls. He He may advertise himself a graduate of any institution he prefers; may claim to have accomplished any number of cures of what have been pronounced incurable disease. He may promise preventives and specifics against any and all maladies; he may publicly announce the most glaring untruths — all for the sake of deceiving and fleecing a credulous public — and the law cannot interfere with his actions. We are repeatedly told that our law makes no distinction between the various schools of medicine, or between the various kinds of practitioners. Members of this Society, homœopathists, electrics, clairvoyants, faith-curers, mind-healers, Christian scientists, are alike legally qualified as physicians. Since the people demand, at times under penalty, services from physicians which only intelligence, education and honesty can supply, and since it is a matter of common knowledge that many stupid, ignorant, and dishonest pretenders to practise exist, it is clearly the duty of the State to discriminate between the two, to legally qualify those who deserve the confidence of the people, and to disqualify those who are often the abettors of crime, the victimizers of youth and the constant source of danger to every member of the community.

The object of such legislation is unmistakable. It is for the protection of the entire community, but especially for that portion of it less favored by education or fortune, by experience or knowledge. Its design is to promote their health, happiness and prosperity by giving them a means of deciding to whom they shall apply for intelligent, skilful and honorable aid in the time of need, often so sudden and unexpected in its coming. It enables them to determine by the only feasible means who is educated and who is not, what physicians are deserving of esteem and consideration, and what practitioners are pretenders, sometimes honest, perhaps, usually specious and presumptuous, and generally wofully ignorant.

To license the physician does not imply that he is not to treat his patients in any way he or they may prefer. It should mean that he is to show, before being allowed to treat disease, that he can discriminate between those which are dangerous to the individual and those which are a source of peril to the public. The former may, perhaps, take his life in his own hands, but he should not be allowed to imperil that of his neighbors.

Such a law offers no protection to the licensed physician, who can take care of himself. His education and opportunities have taught him to whom he is to go for suitable advice. Nor does it favor his occupation, since the more unskilful or negligent treatment in the community the more the demand for the services of the skilled and upright physician.

The many who ask for this protection and appreciate its need, suffer from the few, who, ignorant of the necessity, are deceived by false pretences, or are blindly devoted to a theory.

The numerous attempts at the legislative control of medical practice which have been made in the past

[1] The Annual Discourse before the Massachusetts Medical Society, delivered June 13, 1894.

twenty-five years show that these aims may be accomplished to a certain extent. Every effort meets with opposition, and it is to the nature of the latter and the arguments it offers that your attention is now requested.

Such opposition is diverse and its motives extremely mixed.

On the one hand is to be found the entire class of those likely to be shown ignorant, unskilful, dishonest or corrupt. These are encouraged and supported by those whose occupation it is to systematically oppose all antagonistic legislation — for a consideration. On the other hand we see intelligent theorists and educators, at times leaders in thought and morals, who object to the infringement of personal rights, or the exercise of paternal care by the government. With these are associated respected leaders of the profession who have vigorously and persistently struggled for the highest possible standard of medical qualification, and oppose or discourage all measures which fall short of it. Thorough supporters of some medical legislation, they are determined opponents of all plans of which they cannot approve. These leaders of the opposition are followed by a considerable number of citizens, insufficiently educated, often ill-balanced, and frequently influenced by arguments of the most specious and superficial character.

In general the grounds for the opposition to the legislative control of the practice of medicine are the following assertions:

It invades personal liberty.

It legislates for a class.

It tends to obstruct the progress of therapeutics.

It is unnecessary.

It is not wanted.

It has proven a failure.

Let us consider these somewhat in detail:

It is claimed to be a violation of personal liberty, since it denies to some their right to pursue the occupation they desire and to others the right to select as medical adviser any person they please.

Herbert Spencer is usually quoted as the leading exponent of this view. He says:[2]

"If it is meant that to guard people against empirical treatment, the State should forbid all unlicensed persons from prescribing, then the reply is, that to do so is directly to violate the moral law. . . .

"The invalid is at liberty to buy medicine and advice from whomsoever he pleases; the unlicensed practitioner is at liberty to sell to whomsoever will buy. On no pretext whatever can a barrier be set up between them without the law of equal freedom being broken; and least of all may the government, whose office it is to uphold that law, become a transgressor of it.

"Moreover this doctrine, that it is the duty of the State to protect the health of its subjects, cannot be established, for the same reason that its kindred doctrines cannot, namely, the impossibility of saying how far the alleged duty shall be carried out. Health depends upon the fulfilment of numerous conditions — can be 'protected' only by ensuring that fulfilment; if, therefore, it is the duty of the State to protect the health of its subjects, it is its duty to see that all the conditions of health are fulfiled by them . . . enact a national dietary; prescribe so many meals a day for each individual; fix the quantities and qualities of food, both for men and women; state the proportions of fluids, when to be taken, and of what kind; specify the amount of exercise, and define its character; describe the clothing to be employed; determine the hours of sleep, allowing for the difference of age and sex . . . and to enforce these regulations it must employ a sufficiency of duly qualified officials, empowered to direct every one's domestic arrangements."

[2] Social Statics 1851, 373.

It is to be remembered that this argument of Mr. Spencer is directed against placing restrictions upon "empirical treatment," which is regarded as a violation of the moral law. But let us quote further:[3]

"Let it be conceded that very many of the poorer classes are injured by druggists' prescriptions and quack medicines. . . .

"Inconvenience, suffering and death are the penalties attached by nature to ignorance, as well as to incompetence — are also the means of remedying these. . . . All means which tend to put ignorance upon a par with wisdom, inevitably check the growth of wisdom. Acts of parliament to save silly people from the evils which putting faith in empirics may entail upon them, do this, and are therefore bad. Unpitying as it looks, it is best to let the foolish man suffer the appointed penalty of his foolishness. For the pain — he must bear it, as well as he can; for the experience — he must treasure it up, and act more rationally in the future."

This argument of more than forty years ago is persistently brought forward whenever the question is raised of the control of medical practice by the State. It is usually overlooked that it relates especially to prescribing, whereas the practice of medicine includes other considerations than that of providing means of treatment.

Despite the reasoning of Mr. Spencer the government finds it necessary to take certain steps, theoretically objectionable, for the protection of the health of the individual. It does not prescribe the number of meals per day, or the proportion of fluids and solids, the amount and character of the exercise, the kind of clothing and the hours of sleep. It does, however, insist that food offered for sale shall be unadulterated and wholesome; that water-supplies shall be uncontaminated; that noxious trades shall be rendered, as far as possible, harmless; that clothing shall be made under certain conditions. The State cannot protect the health of its subjects in every respect; but it everywhere endeavors to accomplish something. Even Mr. Spencer may be quoted in approval:[4]

"He who contaminates the atmosphere breathed by his neighbor, is infringing his neighbor's rights . . . and in the discharge of its functions as protector, a government is obviously called upon to afford redress to those so trespassed against."

Professor Huxley's name is usually coupled with that of Mr. Spencer as an opponent to placing restrictions upon the practice of medicine. His words are as follows:[5]

"In my judgment the intervention of the State in the affairs of the medical profession is to be justified . . . simply and solely upon the ground that the State employs medical men for certain purposes, and as employer, has a right to define the conditions on which it will accept service. It is for the interest of the community that no person shall die without there being some official recognition of the cause of his death. It is a matter of the highest importance to the community that in civil and criminal cases, the law shall be able to have recourse to persons whose evidence may be taken as that of experts; and it will not be doubted that the State has a right to dictate the conditions under which it will appoint persons to the vast number of naval,

[3] Social Statics, 1851, 377.
[4] Op. cit., 372.
[5] Nineteenth Century, 1884, xv, 228.

military and civil medical offices held directly or indirectly under the government. Here, and here only, it appears to me, lies the justification for the intervention of the State in medical affairs."

Although this plea that the regulation of the practice of medicine is a violation of human rights has regularly been brought forward for the purpose of exciting sympathy, it has repeatedly been declared by the courts, except in New Hampshire, to be invalid.

It is best answered in the words of Judge Williams :[6]

"In a certain sense it is true that every man has a natural right to follow out the bent of his inclination, and be a clergyman, a lawyer, a doctor, a scavenger, a peddler, an auctioneer, just as he may choose. But, it is not true that a man can practise any one of these professions or occupations except he does it upon such terms as the law imposes, and the law can impose just such terms upon any one of these professions or employments as the legislators in their discretion deem best for the interest of the community. . . .

"The right to practice medicine is a mere statutory privilege, subject to be changed at any time by the legislature."

It is claimed to be class-legislation, producing a monopoly, and, therefore, unconstitutional. We have again a statement, which is offered to excite sympathy, although its illegality has been demonstrated. It is everywhere recognized that legislation designed for the welfare of the people is the duty of the State, and is approved, if not demanded, by the public. The only question is to what extent shall such class-legislation be carried. The people alone are to decide. Licenses are given to peddlers, plumbers and apothecaries, to dealers in liquor, milk and oleomargarine. Pilots must show a familiarity with the dangers to navigation in the waters through which they undertake to guide vessels, before they can be permitted to take charge of them. Surgeons must be examined as to their medical and surgical knowledge before they can be appointed to the service of the militia. These are but a few of the illustrations that such class-legislation as is contemplated in the licensing of physicians is taking place constantly and with uniform approval. It does not create a monopoly, since it does not limit the practice of medicine to any particular sect or school. Any person can still become a physician by taking the necessary steps to secure a proper preparation for an occupation which is generally conceded to be one of great responsibility, and one demanding a various training. What is open to all is no monopoly. But this objection, too, has been definitely settled by the decision of the Supreme Court of the United States, given by Mr. Justice Field in the case of Dent *v.* West Virginia.[7] According to him

"there is no arbitrary deprivation of such right where its exercise is not permitted because of a failure to comply with the conditions imposed by the State for the protection of society. The power of the State to provide for the general welfare of its people authorizes it to prescribe all such regulations as, in its judgment, will secure or tend to secure them against the consequences of ignorance and incapacity at well as of deception and fraud. . . . The nature and extent of the qualifications required must depend primarily upon the judgment of the State as to their necessity. . . .

"We perceive nothing in the statute which indicates an intention of the legislature to deprive any one of his right. No one has a right to practice medicine without having the necessary qualifications of learning and skill; and the statute only requires that whoever assumes, by offering to the community his services as a physician, that he possesses such learning and skill, shall present evidence of it by a certificate or license from a body designated by the State as competent to judge of his qualifications.

. . . . . .

"There is nothing of an arbitrary character in the provisions of the statute in question; it applies to all physicians, except those who may be called for a special cause from another State; it imposes no conditions which cannot be readily met."

We are told that a law to license medical practitioners will obstruct the progress of therapeutic knowledge, since certain so-called healers and curers will refuse to be examined for a license. This class is likely to include the hydropaths, psychopaths, naturepaths, omnipaths, mind-healers and faith curers, spiritualists, mesmerists and Christian scientists, botanic, hygienic and Indian physicians, the seventh son of a seventh son, and the retired clergyman whose sands of life have nearly run out, and the like.

They will refuse to be examined, since they are conscious of their inability to pass an examination, or they may claim that they will suffer a loss of therapeutic power by acquiring knowledge of the anatomy and physiology of the body or of the symptoms and diagnosis of disease. These people should not be licensed unless they submit to the requirements which are deemed sufficient to test the qualifications of physicians. There need, then, be no interference with such therapeutical experiments as they and their patients see fit to carry on, at their own exclusive risk.

The demand for such persons, under some title or other, will always exist. There are many worthy citizens, some of a high degree of intelligence in many things, who firmly believe that most remarkable and wonderful cures have been accomplished by such "healers." They are told, and are willing to believe, that the latter possess the gift of healing, and have "divined" the successful treatment of disease. Such miraculous cures have been reported in all ages, but the methods of their accomplishment have proven no commendable additions to therapeutic knowledge. They are recognized as dependent upon mental peculiarities, by no means to be encouraged, of the patient, and equally striking and frequently objectionable characteristics of the practitioner.

We are told that the latter will refuse to be examined because he may lose his power. It is to be remembered that Christian scientists are not the only practitioners who have obtained successful results by the use of faith. Dishonest charlatans have been as fortunate as religious enthusiasts, and eminent physicians have proven quite as successful as either. Mental therapeutics may accomplish wonderful results in certain instances, but the ability to use them is in no respect limited to persons ignorant of any claim to medical knowledge. It may well be admitted that there are some patients who will recover under certain therapeutists, but not when licensed physicians attempt their treatment. It is unfair to deprive such individuals of this possibility unless there is a risk to others.

Even Mr. Spencer recognizes the importance of restraining those "who contaminate the atmosphere," and no person should be allowed to undertake the treatment of the sick without previously having given evidence of a sufficient knowledge of the means of recognizing contagious diseases and the measures to be adopted to check their dissemination.

[6] Rep. Ill. State Board of Health, 1885, vii, 432.
[7] 129 United States, 114.

There are those who claim that were there no other objection to the further control of medical practice it is unnecessary, since it would add but an infinitesimal degree of security to the citizen's chance of being faultlessly treated when sick, and the people are already protected by the existing laws against malpractice and manslaughter.

No honest and intelligent physician of practical experience claims to treat faultlessly a sick person. No sensible physician, familiar with the seats and causes of diseases, believes that it ever will be possible to always treat faultlessly the sick person, provided it is meant by this phrase to cure him of his disease. But the treatment of the sick person is but a part of the doctor's duty. To enable his patients to avoid disease, to prevent them from becoming dangerous to others, are not the least important parts of his occupation. Education alone, in addition to intelligence and honesty, can enable him to promote these aims.

The practise of Massachusetts courts in medical cases during the greater part of the present century was based on the decision of Chief Justice Parsons in 1809,[8] that if the patient's death is the result of treatment honestly administered, the person prescribing is not guilty of manslaughter. It is only within the past ten years that this decision has been reversed[9] by the declaration of Judge Holmes that one who practises with reckless ignorance or negligence is liable for homicide, and for civil damages if he causes injury by ignorant or unskilful practice.

The number of cases of death due to the gross ignorance or negligence of the charlatan is unknown. Some are probably familiar to many members of this Society. I merely allude to the statement of the court that Thomson, who gave his name to Thomsonianism, without reasonable doubt caused the death of his patient by unskilful treatment. That Franklin Pierce was the cause of his patient's death by ordering the application of flannels saturated with kerosene oil for some three days. That a barber in Illinois, by the unscrupulous methods of the quack, obtained a considerable practice, and caused "the brutal butchery of a mother in labor and her unborn offspring."[10]

Other instances, occurring in his own experience, are mentioned by the medical examiner for Suffolk County, Dr. F. W. Draper, in his argument before the Public Health Committee of the Legislature, February 14, 1894.

Dr. F. B. Harrington, of Boston, informs me of a poor woman who was suffering from copious and continuous hæmorrhages from uterine cancer. These were controlled in accordance with his advice. She later came under the care of a Christian scientist, who told her there was nothing the matter, and that she might go out and pursue her daily occupation. The bleeding returned, but the advice to go about was persisted in. A hæmorrhage took place while she was away from her home and caused her death shortly after her return. Similar illustrations of death following the gross ignorance of persons claiming to cure disease might be produced almost without limit, and the existing laws fail to prevent them.

But it is claimed, if the person is injured as a result of negligence or lack of skill, a suit for damages may be brought. As a rule such cases do not come to trial. Those which are brought before a jury are usually directed against educated physicians of means for various motives. The hospitals of every large city are constantly resorted to by unfortunates who have been induced to apply to ignorant and pretentious charlatans for medical or surgical aid, and have suffered grievous injury from following their advice. If the sufferer realizes the cause of his misfortunes, he may be unable to secure the services of counsel. If he should be successful in this effort he usually recovers nothing, since the charlatan either has no visible means, or leaves the State in time to escape an unfavorable verdict. Much more often he suffers in ignorance of the cause of his suffering.

Not only are the laws against manslaughter and malpractice insufficient to protect the community, but those intended to guard against the spread of contagious diseases are alike ineffective. The ignorant pretender, under whatever title he or she may appear, often does not recognize the nature of the contagious disease. No suggestion is made of isolation. Well children are allowed to play with the sick. All are permitted to go to school, and the outbreak of scarlet fever or diphtheria is thus promoted, which could have been avoided by the intelligent precautions of an educated physician. I have before me the advertisement of a person employed in a street-car, announcing "Diphtheria cured in all stages." Cases were taken to him for treatment and were not reported to the Board of Health. The law concerning the notification of contagious diseases could not apply to this person, since he did not call himself a physician; neither was he a householder, and he could have pleaded ignorance of the nature of the malady. The cases under his treatment which were about to die were referred, at the last moment, to physicians who were then called upon to give such aid as was possible. Existing laws do not protect the community from such persons as these.

We are told that the legislation is not wanted, since the people do not ask for it. The history of medical legislation in the various States of the Union furnish direct evidence to the contrary. Appeals are made by clergymen, lawyers, authors, physicians and public-spirited men of every degree. Physicians, it is true, as a rule, take the initiative, since the evils resulting from the ignorance or lack of skill of the pretender are usually first brought to their notice. The grievously sick or dying victims of the abortionist, the moribund patient deceived by the promises, or injured by the statement of the charlatan, eventually seek aid from the educated physician in good standing, often at a time when death is but a few hours removed, or permanent deformity has been made a necessity, or conditions often bordering upon insanity have been reached.

It is this experience of the doctors which has opened the eyes of the people, and it is the enlightened common-sense of the latter which has decided upon the need of the regulation of the practice of medicine throughout nearly all the United States.

Finally, we are told that the State control of medical practice has proven a failure. At the present time some sort of law intended to regulate the practice of medicine exists in nearly every State and Territory of the Union. These laws differ widely in

[8] Commonwealth *v.* Samuel Thomson, 6 Mass. Rep., 134.
[9] Commonwealth *v.* Franklin Pierce, 138 Mass. Rep., 165.
[10] Rep. State Board of Health, Ill., 1884, vi, 10.

their scope and in their results, but all have the same end in view — the protection of the people. As some have failed to produce the desired result, suitable amendments have been made. Some of the most recent laws are those which promise to be the most efficient, and it would indeed be astounding were a series of failures likely to act in favor of a renewal of the same undertaking. On the contrary, the failure of the earlier attempts at medical legislation has led to the avoidance of the causes of failure, and the reports from various States give encouraging evidence of what has been accomplished.

(To be continued.)

THE INFLUENCE OF ANIMAL EXPERIMENTATION ON MEDICAL SCIENCE:

ABSTRACT OF THE PRESIDENT'S ADDRESS BEFORE THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS, AT ITS THIRD TRIENNIAL MEETING, WASHINGTON, D. C., MAY 31, 1894.

BY ALFRED L. LOOMIS, M.D., OF NEW YORK.

THE specific problems with which medical science deals are questions of the relative influence of multiple forces on the production of given results. Only the deepest ignorance can fail to recognize that the forces concerned in the simplest change of inorganic nature are so numerous and their relations so complex that they defy recognition under uncontrollable conditions, while in the organic world the task is even more hopeless. Experimentation, therefore, in which one or more of the involved forces can be controlled, becomes an absolute necessity in all scientific investigation. However clear the mental analysis, however accurate the logical demonstration from cause to effect, it is possible by experiment alone to prove that no involved force has been overlooked. Is it not strange that medicine should be denied the right to follow those imperative methods of scientific reseach which are so unquestionably accorded to every other science? It is not a little surprising that men with an appreciation of the necessity of experimentation should for so long have preferred to be its subjects, and that even to-day so many refuse to yield the place to animals. For example, in widespread epidemics we note the effects of an infection on perhaps half a million of human beings, with a great sacrifice of human life. On the other hand, we study in laboratories the cause of the epidemics with a comparatively small sacrifice of animal life.

In entering upon the consideration of this subject the author fearlessly laid down this proposition: Every distinct advance, every established principle, and every universally accepted law of medical science has been in the past and will be in the future the direct, if not the immediate result of animal experimentation. He then passed to a review of some of the obvious and conclusive proofs of this proposition.

It is not too much to claim that during the latter half of the present century the results obtained from experiments on animals have done more than all the observations of the preceding centuries to raise medicine from conditions of vagueness to conditions of exactness. From the time of Aristotle, who proved that the blood, brain and spinal marrow in animals have no sensation, down to the present day, animal experimentation has been practised by all investigators who have gained any definite knowledge of the more important phenomena of animal life.

Galen must be regarded as the pioneer in this line of investigation. By his experiments on living animals he showed that arteries contain blood, that the lungs passively follow the movements of the chest, and that the diaphragm although the most important is not the only muscle of respiration. Further, by section of the spinal-cord and of the recurrent laryngeal nerve, he demonstrated the nervous control of the voice and explained the mechanics of respiration. He also advanced the knowledge of the functions and movements of the alimentary canal and laid the foundation of our knowledge of the functions of the brain and spinal-cord. The results of his experimental work are now as conclusive as when first made, and are the only part of his vast labors which have stood the test of modern investigation.

From Galen's time to Harvey's great discovery, little experimental work was done; and during this time medicine ceased to advance. Harvey's demonstration of the circulation of the blood in 1620 rests entirely on animal experimentation, as is shown by his writings.

The next series of important investigations on animals were applied by Galvani and Volta to the nervous system.

In 1664 Robert Hook, by inflating the lungs of animals by means of a bellows, demonstrated artificial respiration. The experiments of Boyle and of Priestly in the seventeenth century laid the foundation of our knowledge of the respiratory process.

The injection of fluids into the blood-vessels of animals was first done by Dr. Christopher Wren. In 1666 Richard Lower performed the first tranfusion, and the following year Dr. Denis performed the same experiment on man.

Haller, in the middle of the eighteenth century, proved that all motion in the human body proceeds in great measure from the brain and spinal-cord. He also demonstrated that irritation of the peripheral end of a severed nerve produced contraction in the muscle to which it was distributed. This was followed by the experiments of Sir Charles Bell. At the beginning of the present century Magendie demonstrated the difference between the anterior and posterior roots of the spinal-cord. His experiments on animals by the injection of various medicinal substances enabled him to lay the foundation of the doctrine that remedies exert their action upon special structures and organs. In this line of work he was followed by Claude Bernard. It is perhaps a conservative statement, that, excluding the medicinal foods, ninety per cent. of all our medication is made definite and valuable by this principle alone. Magendie, Bernard and Loget established by their experiments the doctrine of recurrent sensibility, which was followed by the discovery of Marshall Hall of reflex action of the spinal-cord. The doctrine of vaso-motor action was practically demonstrated by Bernard's experiments.

John Hunter, in 1785, by his experiments on dogs, established the fact that injuries to healthy arteries were soon repaired, and that ulceration after ligature occurred only when the vessel was diseased. The experiments led him to apply ligatures for the cure of aneurism to healthy portions of the arteries. Hunter first learned by experiment on pigeons and young pigs that the growth of bone was from the periosteum.

Address.

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BY REGINALD H. FITZ, M.D., BOSTON.

(Continued from No. 24, p. 585.)

THE success of medical legislation in this country is now a matter of history; and it will be attempted to give a short sketch of what has been accomplished.

According to the researches of Dr. Joseph M. Toner,[11] the earliest legislation in the colonies relative to the practice of medicine was in Virginia in 1639. It appears that the charges of physicians and surgeons were so excessive

"that the hearts of divers masters were hardened rather to suffer their servants to perish for want of fit means and applications than by seeking relief to fall into the hands of griping and avaricious men; it be apprehended by such masters, who were more swayed by politick respects than Xian duty or charity, that it was the more painfull and saving way to stand to the hazard of their servants than to entertain the certain charge of a physitian or chirurgern, whose demands for the most part exceed the purchase of the patient."[12]

A few years later this act was revised for the purpose of making a distinction between the charges of "surgeons, apothecaries, or such as have only served apprenticeship to those trades, who often prove very unskilful in the art of a physician"; and of those who have studied physic in any university and taken any degree therein.[13]

In 1649 Massachusetts passed a law forbidding "phisitians, chirurgians, midwives, or others," presuming "to exercise or putt forth any act contrary to the knowne rules of arte," or exercising "any force, violence or cruelty . . . no, not in the most difficult and desperate cases, — without the advice and consent of such as are skilful in the same arte, etc., etc."[14] This law was also inserted in the Duke of York's laws enacted about 1665 for the government of the province of New York.

Dr. Toner's valuable article contains no evidence of further attempts at regulating the practice of medicine during the subsequent century. The number of carefully educated physicians was inconsiderable, quacks abounded, and of New York in 1753 it was stated:[15]

"That place boasts the honor of above forty gentlemen of the faculty, and far the greatest part of them are mere pretenders to a profession of which they are entirely ignorant." . . .

"The war resulting in the conquest of Canada and subjugation of the French in 1763 created a demand for skilled medical officers and aided in the training of American students. Many of the English medical staff remained for several years in the vicinity of New York, establishing military hospitals and aroused the ambition of the colonial practitioners.[16] . . .

"Although partial recognition of the profession and protection of the people had been secured in several of the colonies, and particularly in some of the larger cities, by legislation, the first well considered act regulating the practice of physics was that passed in New York, June 10, 1760, beginning as follows: 'Whereas many ignorant and unskilful persons in physick and surgery, in order to gain a subsistence, do take upon themselves to administer physick and practise surgery in the city of New York, to the endangering of the lives and limbs of their patients, and many poor and ignorant persons inhabiting the said city, who have been persuaded to become their patients, have been great sufferers thereby; for preventing such abuses for the future —

"'1. *Be it enacted*,'" etc.[17]

According to this act no person was allowed to practise, under a penalty of five pounds and costs, who had not previously passed an approved examination in physic and surgery before one of his Majesty's council, the Judges of the Supreme Court, the Attorney-General and the Mayor for the time being, or any three of them, taking to their assistance for such examination such person or persons as they in their discretion shall think fit.[18]

Twelve years later a similar act was passed in New Jersey at the instigation of the New Jersey Medical Society, and was the first comprehensive, protective law applied to a colony, the legislation above mentioned applying only to the city of New York. The examination was approved of and admitted by "any two of the judges of the supreme court, taking to their assistance for such examination such person or persons as they in their discretion shall think fit."[19]

In the following year, 1773, the code of Virginia required every surgeon, physician and dentist to take out a license, which authorized the holder to practise anywhere in the colony. Neglect to procure a license was punishable by a fine of not less than thirty nor more than one hundred dollars, nor could such negligent practitioners collect compensation for services.[20] In the same year, in Connecticut, a law for the suppression of mountebanks was enacted,[21] although a year later the Lower House of Assembly in this colony negatived the memorial of Norwich physicians asking for the appointment of a committee legally authorized to examine and approve candidates if found qualified.[22]

The War of the Revolution now occurred. Dr. Toner[23] thinks it probable that at this time

"there were not living in all the colonies 400 physicians who had received medical degrees; and yet, as is stated elsewhere, there were presumed to be over 3,500 practitioners."

According to the same authority,[24] the war gave

"great impetus and energy to the whole population of the colonies. The experience gained by the medical men who served in the army elevated their views, gave them confidence in the exercise of their professional duties, endeared them to the public, and made them almost oracles in the communities in which they resided. The spirit of gratitude also created friends for the profession in the various legislatures, led to the enactment of laws which were more just and protecting in their character, and popularized the more recent and thorough modes for the scientific study of medicine."

In 1783 New Jersey was the first of the States to pass a law regulating the practice of medicine. It was followed in 1792 by New York, which demanded of

[1] The Annual Discourse before the Massachusetts Medical Society, delivered June 13, 1894.

[11] Contributions to the Annals of Medical Progress and Medical Education in the United States before and during the War of Independence, 1874.

[12] Hening's Statutes at Large, i, 316, 317; Toner, loc. cit.

[13] Hening, op. cit., iv, 509, 510; Toner, loc. cit.

[14] Records of Massachusetts, 1854, iii, 153.

[15] New York Independent Reflector, Toner, loc. cit., 49.

[16] Davis, History of Medical Education; Toner, loc. cit., 37.

[17] Toner, loc. cit., 51.

[18] Trans. Med. Soc. State of New York, 1840-43, 12.

[19] Toner, loc. cit., 52.

[20] Trans. Ill. State Med. Soc., 1881, xxxi, 256.

[21] Toner, loc. cit., 70.

[22] Times and Register, 1893, xxvi, 1027.

[23] Toner, loc. cit., 106.

[24] Toner, loc. cit., 107.

practitioners in the city and county of New York two years of study with a reputable physician, if the candidate was a graduate of a college in the United States, otherwise three years of study. Also an examination before the Governor, Chancellor, Judges of the Supreme Court, Attorney-General, Mayor and Recorder of the city of New York, or any two of them who were to take to their assistance any three respectable practitioners with whom the examined person had not lived. The certificate of this board was a license to practise, and without it no legal demand could be made for services. Physicians who had regularly received the degree of Doctor of Medicine, those already in practice, and consulting physicians from neighboring States or counties were exempt from the provisions of this law. The above, somewhat modified, was made, in 1797, the general law of the State.[25]

In 1798 power was given to the Medical and Chirurgical Faculty of Maryland to grant licenses "upon full examination or upon the production of diplomas from some respectable college." The penalty for practising without a license was $50.00 for each offence.[26]

During the first forty years of the present century, legislation, with a view to regulate the practice of medicine, was frequent and various. The initiative was taken by those desirous of protecting the people from ignorance, lack of skill and extortion; and the opposition came from quacks and pretenders of every kind.

New York, in 1806, incorporated medical societies for the purpose of regulating the practice of physic and surgery, following the example set by Massachusetts, and which proved so successful in that State after the amendments adopted by the Massachusetts Medical Society in 1804. In 1808, a few years after the territory of Orleans was set off from the Louisiana purchase, a bill was enacted by the territorial government, stating "that no person shall presume to practise medicine" without an examination, for which a diploma from some university or school was a qualification. This law was amended in 1816, and was enacted as the law for the State of Louisiana.[27]

From this time on, State after State passed some form or other of a law for the prevention of quackery. And it is stated by Senn [28] that during the first half of our national existence every State had enacted such laws, with the exception of Pennsylvania, North Carolina and Virginia.

These laws, however, did not long remain operative; they were premature in many instances, there not being enough educated physicians to provide for the needs of the people. Quacks thus found their way into the remoter sections of the State, and their presence and assertions were welcomed by the sick and infirm. They practised in defiance of the law, whereas, now, unlicensed practitioners are declared exempt from the penalties of the law in States like Arizona and Idaho, when there is no licensed physician living within a convenient distance of the patient. Quackery spread from the remoter districts towards the centres of population, became more and more popular, and excited the more sympathy the more it was opposed. The difficulties in the way of enforcing the laws became greater. Juries refused to convict, officers of the medical societies neglected to bring charges, and finally the laws were so amended as to exempt all quacks, mountebanks and charlatans from the penalties. This result attained, the laws became useless, and in certain States were effaced from the Statute Book.

The first serious blow to the regulation by the State of the practice of medicine was the result of the spread throughout the country of the doctrines of Samuel Thomson, who died in 1843. He was an illiterate farmer of New Hampshire, an empiric of the first water, but distinctly a remarkable man. He denounced the heroic treatment then in vogue by means of bleeding, mercurials and mineral medicines in general, and advocated the use of certain vegetable agents whose value he claimed to have discovered. He stated that he was in the habit of tasting herbs and roots, and was thus enabled to ascertain what were useful for any particular disease. In his "Narrative," [29] first published in 1822, he announces as his general plan of treatment:

"to cleanse the stomach by giving No. 1, and produce as great an internal heat as I could by giving No. 2, and when necessary made use of steaming, in which I have always found great benefit, especially in fevers; after this I gave No. 3, to clear off the canker; and in all cases when the patient had not previously become so far reduced as to have nothing to build upon, I have been successful in restoring them to health."

No. 1 consisted of lobelia; No. 2 of red pepper; and No. 3 of a variety of herbs, including rosemary, bayberry, myrtle, sumac or raspberry, although he states that a great many other articles were "useful in removing canker."

In 1809, he was tried for the murder of one of his patients.[30]

"As the learned Judge could find no law, common or statute, to punish the accused, he directed or advised those present to stop this quackery, as he called it, and for this purpose to petition the Legislature to make a law that should make it penal for all who should practice without license from some medical college to debar them of law to collect their debts; and if this should not answer, to make it penal by fine and imprisonment.

"This hint, thus given by the judge, was seized upon first in Massachusetts; from thence it has spread to nearly all the States of the Union. From this source may be traced all those unconstitutional laws which have been enacted in relation to this subject, and all those vexatious suits which I have had to attend in many of the States, from Massachusetts to South Carolina, more or less almost every year since. But I have been able to break them down by my patent being from higher authority, which Judge Parsons could not prevent, or perhaps he never thought of. He, however, made his own report, and handed it to the reporter, which is published in the sixth volume of Massachusetts Reports, and is resorted to by all the enemies of the practice for a defence against the system."

He afterwards brought suit against his principal accuser, Dr. French, which came to trial, again before Chief Justice Parsons, in 1811.[31]

"The judge then gave his charge to the jury, which was considered by those who heard it, to be the most prejudiced and partial one that they had ever heard. He made use of every means to raise the passions of the jury and turn them against me; stating that the defendant was completely justified in calling me a murderer, for if I was not guilty of wilful murder, it was barbarous, ignorant murder; and

[25] Trans. Med. Soc. State of New York, 1840-43, 12.
[26] Quinan, New York Med. Record, 1886, xxix, 505.
[27] Chaillé, New Orleans Med. and Surg. Journal, 1877-78; N. S., 5 909.
[28] Trans. Wis. State Med. Soc., 1879, xiii.
[29] A Narrative of the Life and Medical Discoveries of Samuel Thomson, etc., 8th ed., 1832.
[30] Op. cit., p. 167.
[31] Op. cit., p. 176.

even abused my lawyers for taking up of me, saying that they ought to be paid in screw augers and bull dogs."

The jury brought in a verdict for the defendant.

In 1813 he obtained a patent to secure to him the exclusive right of his system, and to put him above the reach of the law in any State. But in 1821 Judge Story decided that its specifications were improperly made out, and in 1823 a new patent was obtained.[32]

"The preparing and compounding the foregoing vegetable medicines, in manner herein described, and the administering them to cure disease, as herein mentioned, together with the use of steam to produce perspiration, I claim as my own invention."

The simplicity of his theories of disease and of its treatment, the use of simples, always commending itself to the popular mind, and the notoriety attained by numerous lawsuits, all served to attract attention to Thomson's doctrines. Many editions of his writings were published, and agents were employed to travel throughout the States, selling with the book and medicines a family right to practise for $20.00. "Friendly Botanic Societies" were established, the membership being composed of those who had purchased family rights, and the privileges in which are stated by him as follows:[33]

"Every one who purchases a right for himself and family, becomes a member of the Friendly Botanic Society, and is entitled to all the privileges of a free intercourse with each other, and to converse with any one who has bought a right, for instruction and assistance."

Thomson's doctrines were especially favored in the eastern section of Massachusetts, and along the adjacent borders of Maine, New Hampshire and Vermont.

After the publication of his "Narrative" and the employment of agents, he and they travelled extensively in the South and West. Although they were unlicensed practitioners in most States, the laws had no penalties sufficient to prevent them from practising. His followers succeeded in securing the enactment of laws by which no person was to be debarred from using or applying for the benefit of the sick person any roots, barks or herbs, the growth or produce of the United States. At first the proviso was added, that they should be unable to recover by process of law any debt incurred from such practice. This objection was easily met by obtaining fees in advance. The restriction was of greater value to them for advertising purposes in creating sympathy, and we learn[34] that "thousands have had their sympathies enlisted in their behalf; have come to believe their senseless clamor, and had their prejudices aroused against the medical profession." Finally medical schools, called "eclectic," were established by those who were willing to take advantage of Thomson's success, adopting his practice, but avoiding his interference.

Thomsonianism prepared the way for the success of homœopathy, which proved to be the more effectual agent in annulling the licensing of physicians. In the words of Dr. J. W. Hamilton,[35] "It swaggered on the stage long enough to give a wholesome check to the excesses that brought it into being, and proved itself the bloodiest murderer that ever visited our too credulous community in the form of quackery."

In certain respects homœopathy bore a close resemblance to Thomsonianism. It represented a reaction from the heroic treatment of the regular physicians; it offered a few remedies, although in palatable form, with such specific and authoritative directions that the family provided with pellet and pamphlet had but little need of the educated physician. Its leaders, however, came from the ranks of the latter, and its followers were to be found among the more intelligent, prosperous and influential members of society. Its adherents increased in numbers in the cities and larger towns, and it throve upon the opposition it encountered from members of the regular profession. Like Thomsonianism, it called for sympathy on the ground of intolerance, and persecution on the part of licensed physicians, and Thomsonianism and homœopathy combined succeeded in so emasculating existing laws regulating the practice of medicine that they became useless, and their removal from the statutes was often sought by all alike.

In 1838, Maryland made it lawful for every citizen of the State to charge and receive compensation for his services and medicines. In the following year, Georgia passed a revised medical act, in which it was "provided nothing be so construed as to operate against the Thomsonian or botanic practice or any other practitioners of medicine in this State."[36] A few years later, in 1847, it established a Botanico-medical board, with the same powers and duties as the regular board.[37] In New York, in 1844, a bill was enacted, of which Judge Beardsley said: "Since the passage of the act of 1844, quackery may certainly boast its triumphant establishment by law."[38]

At the close of the first half of the present century there were practically no efficient laws controlling the practice of medicine by the licensing of physicians in this country. The history of such legislation in Massachusetts from the War of the Revolution to that of the Rebellion has been given elsewhere.[39] Existing laws had either been repealed or were not enforced, and the regularly educated physicians had ceased in their efforts to suppress quackery by attempting any legislative prohibitory enactments. They were largely responsible for this result. With the best of intentions throughout these fifty years, they failed to read aright the signs of the times, and by errors of omission and of commission they rather aided the progress of quackery than checked its growth.

With the incorporating of medical societies by the State, the licensing of physicians was placed in their hands. Examining boards were established and candidates were to appear before them. But in some States these boards were so few, and the members lived so far apart, that the examinations were not held. Such evasions of the law made it easy for a rejected candidate to obtain a special act of the legislature allowing him to practise. In case of rejection by one board he might appear before another less exacting. If all the boards in any one State were too stringent, it was possible for the candidate to obtain a license in another State, where the terms were less rigid, even by mere payment of the registration-fee. A license thus obtained was usually valid in other States. If he practised in violation of the law, it was the duty of no one to bring suit. Although the licensing power was transferred by the State to the medical societies, members

[32] Op. cit., p. 243.
[33] Op. cit., p. 220.
[34] Trans. Med. Soc., State of New York, 1844-49, vi, 46.
[35] Trans. Ohio State Med. Soc., 1867, 36.
[36] Trans. Med. Soc., State of New York, 1844-49, vi, 45.
[37] Southern Med. and Surg. Journal, 1866, 7, 3d s., i, 456.
[38] Purrington, New York Med. Record, 1886, xxx, 452.
[39] The President's Address, Trans. Assoc. Am. Phys., 1894, ix.

of the latter were unwilling to act as accusers and prosecutors from the demand it made upon them for time and money, and the necessity it placed them under of assuming a disagreeable and opprobrious task. Even if cases were brought to trial conviction was difficult, since the penalty was so severe that the jury was unwilling to condemn what it was told was essentially a difference of opinion.

What must be regarded as their chief mistake was the treatment of their homœopathic brethren. Irrespective of all questions of ethics it was a decided and decisive error of policy. The latter were educated physicians, certainly as honest as many of their associates, whatever may be said of their intelligence. Their expulsion and ostracism created two powerful opponents, largely representing two distinct classes of society, but united in their efforts to resist repression. The botanic, eclectic and physio-medical practitioners (the off-shoots and successors of Thomsonianism) and the homœopathists, as they increased in numbers and strength, were, combined, enabled to secure the repeal of all restrictive legislation. They became exempted by law from the need of a license, and the regular physician saw no necessity of paying the fee for a license which placed him in no different light before the public than the quack. As the irregulars formed chartered medical societies with the same privileges as those possessed by the regular societies, members of the latter in many States became active in securing the repeal of laws which proved of no value to the community. Eclectic and homœopathic medical schools were established, and the name of physician and the title of doctor of medicine no longer became of the least value in acquainting the public with any distinction between the educated practitioner and the ignorant pretender, and no check whatever was placed on the increase of the latter.

An interval of some twenty years now elapsed, during the first half of which the State medical societies were perfecting their organization with the view of maintaining a high standard of membership. A certain degree of uniformity in this action was the result of the formation of the American Medical Association in 1847. The annual meetings of this organization brought together representative men from the various State societies, most of whom had been actively interested in the legislative control of medical practice. They endeavored to improve the standard of medical education and the ethics of the regular profession throughout the country. The War of the Rebellion created a sudden and extensive demand for educated physicians and surgeons, their numbers speedily increased, and the subsequent rapid growth of the country has continued this increase. The brilliant progress in the various specialties of medicine made more apparent the distinction between the educated and skilful physician and the ignorant but pretentious quack. Homœopathic and eclectic medical schools were paying more attention to the instruction of their students, and the line was thus being more sharply drawn between practitioners of no training and those who had received some teaching. All educated physicians, whatever their degree of instruction, were interested in defending the community from mere pretenders, and their combination has led to the successful medical legislation of the past twenty-five years.

Since the law recognizes no distinction between regulars, homœopathists and eclectics, on the contrary, the legislators have given like privileges to each, by incorporating them into medical societies and medical schools, it became obvious that if any legislation was to be secured against the worst forms of quackery, it must be obtained by the practical agreement of these incorporated medical bodies. The numerous experiments which have been made in the various States during the past twenty-five years, and which have led to the enactment of licensing laws in nearly all the States and Territories, have been the result of this harmony of action.[40] It has been justified not only by the needs of the community for protection, but also by the fact that both homœopathists and eclectics represent a kind of practitioner whose education is constantly improving. Homœopathists, in particular, have been, from the beginning, physicians of a certain, and at times of a considerable degree of education. They are honestly and earnestly endeavoring to improve their educational facilities, and some of the eclectic schools are following in their footsteps.

In 1872, a bill was prepared under the auspices of the New York Medico-Legal Society, and was favorably acted upon by the legislature, but was subsequently vetoed by the governor.[41] This unsuccessful attempt was followed in 1873 by the passage of a law in Texas, requiring the registration of diplomas by all practitioners entering the State. It was repealed and replaced in 1876 by an act establishing boards of examiners, who were to examine all applicants for certificates of qualification without preference to any school of medicine. This law, to-day, in the words of Dr. West of Galveston, "is practically inoperative, as but few boards are organized, and about most that any of them do is to license non-graduates."

In the District of Columbia in 1874 it was the duty of every physician to register at the office of the board of health, under penalty of from $25.00 to $200.00. This regulation was legalized by Congress in 1880. All physicians required to register must do so upon a license from some chartered medical society, or upon a diploma from some medical school or institution.

The law of Nevada, enacted in 1875, makes a lawful practitioner one who has received a medical education and a diploma from some regularly chartered school having a *bona fide* existence when the diploma was granted. The county recorder accepts the diploma.

In 1877 a law was passed in Alabama according to which a license or diploma, or certificate of qualification, was essential to the lawful practitioner. If he wished to practise any irregular system, he was obliged to pass an examination in anatomy, physiology, chemistry and the mechanism of labor before the Censors of the Medical Association of the State of Alabama, or of some affiliated County Medical Society. This act was replaced by that of 1887, which was amended in 1891, and according to Dr. Cochran of the Board of Censors is

"almost ideally perfect. If the State would invite us to change it according to our wishes, we would not know what change to suggest. All we have to ask of the State is

[40] For much of the information relative to the provisions of the laws in the various States and Territories, I am indebted to the admirable Synopsis of the existing Statutes, prepared by William A. Poste, late deputy attorney-general of the State of New York, and Charles A. Boston, Esq., of the New York City Bar, for the text-book of Medical Jurisprudence, Forensic Medicine and Toxicology, of Witthaus and Becker, just published. By the aid of our librarian, Dr. E. H. Brigham, I have been enabled to obtain from the respective officials of many of the States copies of the medical licensing laws of these States, and take this opportunity of expressing my thanks to all concerned.

[41] New York Med. Journal, 1874, xx, 64.

simply to let our law stand as it is and enforce it in the courts. . . . We have a very few homœopathic practitioners in Alabama, but a considerable number of doctors who, graduated in eclectic schools, have availed themselves of the advantages we have to offer them, and have become good working members of our organization."[42]

In the same year Illinois passed its first law, which was amended in 1887. It is unnecessary to enter into the details of medical legislation during the next fourteen years. It is merely to be stated that laws were passed as follows:

Year.	*State or Territory.*
1880	Vermont.
1882	Georgia, Rhode Island.
1883	Maine, Michigan, North Carolina.
1884	New Mexico.
1885	Indiana.
1886	Iowa.
1887	California, Idaho, Minnesota, Virginia, Wisconsin, Wyoming.
1888	Tennessee.
1889	Delaware, Kansas, Missouri, Montana, Oregon.
1890	New Jersey, North Dakota, Ohio, South Carolina, Washington.
1891	Colorado, Nebraska, West Virginia.
1892	Florida, Maryland, Mississippi, Utah.
1893	Arkansas, Arizona, Connecticut, Kentucky, New York, Oklahoma, Pennsylvania, South Dakota.

(To be continued.)

Original Articles.

THE FREQUENCY OF RENAL ALBUMINURIA, AS SHOWN BY ALBUMIN AND CASTS, APART FROM BRIGHT'S DISEASE, FEVER, OR OBVIOUS CAUSE OF RENAL IRRITATION.[1]

BY FREDERICK C. SHATTUCK, M.D., OF BOSTON.

IN no branch of human activity, perhaps, can more striking illustrations be found of the dangers of hasty conclusions from insufficient data than in medicine. This is no reflection on our calling. It naturally flows from the fact that our knowledge of many things is still very imperfect, while the demands for the practical application of our knowledge are constant and imperative. The sick man wants instant help, and cannot wait while doubtful points are being settled. Medicine is more than an art, less, in a sense, than an exact science. The clinical significance of albumin and casts affords one of these illustrations. The chemical preceded the microscopical examination of the urine, and the latter first made it possible to determine with any accuracy the portion of the urinary tract from which the albumin is derived. The presence of casts shows that the true renal tissue is involved, and was for some time held to be diagnostic of Bright's disease. I well remember the grave prognosis which the discovery of albumin and casts was thought to necessitate when I was a hospital interne, not much more than twenty years ago. Perhaps I incorrectly interpreted my teaching — students sometimes do — but I think this was at that time generally regarded by the profession as damning evidence. Albumin and casts meant Bright's disease, and that meant an inevitably and more or less rapidly fatal disease. Further experience and the irresistible logic of facts has led to such changes in these views that considerable discussion has been held as to whether albuminuria might not be physiological, so common is it found to be, so little bearing may it have on the vigor or longevity of its possessor. Into this discussion I do not propose really to enter. Absolute physical perfection is occasionally found in the human being; but the ideal and the real are nearly as sharply contrasted in the more purely bodily as in the moral qualities. Whether there be a physiological albuminuria is largely a matter of definition of the word physiological.

Much ingenuity has been devoted to the discovery and application of tests of extreme delicacy for albumin. My friend and colleague, E. S. Wood, assures me that for clinical and qualitative purposes none of these tests can compare with the old heat and nitric acid tests; and I am glad to see similar views expressed very recently by D. D. Stewart,[2] of Philadelphia. These are the tests used in the cases which I have analyzed. A cloudiness of the boiled upper layer of urine in the test-tube after the addition of acetic acid, and the opaque zone with nitric acid are therefore considered proof positive of the presence of albumin, as a negative result is proof of its absence. To my eye the heat test is the more delicate of the two, but I know that all do not find it so. Vanderpoel,[3] in a recent paper on albuminuria without manifest organic renal lesion, has collected the literature of the subject and justly calls attention to the discrepancy which exists between the percentages of different observers examining considerable numbers of presumably healthy persons. Chateaubourg finds albuminuria in 84 per cent. of 701 examined; Grainger Stewart in 31 per cent. of 407 examined. Others put the percentage still lower, but even this discrepancy is sufficient to show that something is the matter. Doubtless Millard is right in believing that Chateaubourg, who used Tanret's test in many of his examinations, mistook mucin or some other non-albuminous organic substance for albumin. As far as I know casts have not been looked for as carefully as albumin. The search for them demands a good deal of time if the sediment is scanty; and they may easily be overlooked when present if ample time is not allowed the urine to settle, and if skill in the selection of portions of the sediment is not exercised. Experience has led me to be skeptical when the statement is made to me that a distinct trace of albumin is present, but that casts as well as other formed elements, such as blood and pus, are absent. In such cases I have repeatedly found that more careful examination revealed the casts.

These bodies still enjoy a worse reputation in the minds of the laity than albumin, as well as in the minds of the profession in general. Patients are alarmed by the knowledge that there are casts in their urine, much as they used to be by hearing that they had a murmur in their hearts.

For five or six years now I have been more and more particular to have a thorough examination of the urines of patients seeking my advice made by competent men, quite irrespective of the nature of the complaint which brought the patient. The frequency with which albumin and casts, chiefly hyaline and finely granular of small diameter, was reported in

[1] Paper read at the Ninth Annual Meeting of the Association of American Physicians, Washington, D. C., Thursday, May 31, 1894.

[42] Dunglison, Coll. & Clin. Rec., 1890, xi, 11.

[2] Philadelphia Medical News, May 5, 1894.

[3] Medical Record, November 11, 1893.

Address.

THE LEGISLATIVE CONTROL OF MEDICAL PRACTICE.[1]

BY REGINALD H. FITZ, M.D., BOSTON.

(Continued from No. 25, p. 613.)

THUS, at the present time, there are laws intended to regulate the practice of medicine to a greater or less extent in all the States of the Union, except in Massachusetts and New Hampshire.

The requirements of these laws vary within very wide limits. Rhode Island merely demands that the name and residence shall be recorded in the town clerk's office. In Maine and Wisconsin the physician cannot recover compensation unless he has a medical degree from a public medical institution in the United States, or a license from the State Medical Association, or, in Maine, a certificate of good moral character from the town authorities. The simple registration of the diploma or license suffices in Arizona, the District of Columbia, Georgia, Idaho, Indiana, Kentucky, Louisiana, Michigan, Nebraska, Nevada, South Carolina, South Dakota, and Wyoming. The possession of a diploma or a certificate of qualification from a State or County Medical Society is sufficient in Kansas and Ohio.

The diploma must be verified by boards of examiners in California, Colorado, Connecticut, Delaware, Iowa, Montana, New Mexico, Oregon, South Carolina, Tennessee, Vermont; by boards of health in Illinois, Kentucky, Louisiana, Missouri, Nebraska, Oklahoma, South Dakota, West Virginia. They are only approved when representing certain periods of study in Maryland, Minnesota, Montana, Nebraska, New York, New Jersey and North Dakota.

Candidates who have no diploma are required to pass an examination in Alabama, Arkansas, Colorado, Connecticut, Delaware, Missouri, Montana, New Mexico, North Carolina, Oklahoma, Illinois, Iowa, Oregon, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia.

Examinations are the sole qualification for license in Florida, Maryland, Minnesota, Mississippi, New Jersey, New York, North Carolina (except for graduates prior to 1880), North Dakota, Pennsylvania, Utah, Virginia and Washington.

The effect of these laws also is extremely various. In Arkansas, California, Florida, Georgia, Ohio, South Carolina and Texas the laws are said to be either unworthy of the name, contain glaring defects, are of low standard, unsatisfactory or practically inoperative. Even in North Carolina the law is defied with impunity. On the contrary in Alabama, Minnesota and Virginia, the laws are almost ideally perfect. In New York the promise has been more than fulfilled. More and more support is being given to the law in West Virginia, while in Illinois, Indiana, Iowa, Kentucky and Missouri the laws are efficient, salutary, working well, or meeting with general favor. In New York the number of physicians entering practice has been diminished, and the quality has been improved. Of 327 candidates in 1892, 267 fulfilled the requirements, of whom 244 were regulars, 17 homœopathists and six eclectics. In Indiana 559 practitioners left the State; in Kentucky 400 or 500, and 250 in Minnesota, during the year 1885.

A conspicuous effect of these laws has been seen in the improvement of the standard of medical education. To them, more than to any one cause, is due the difference which exists between the condition now and in 1870. In Alabama, Colorado, Connecticut, Illinois, Nebraska, Oregon, South Dakota and Washington, at least three full courses of five to six months each, no two in the same year, are demanded. The State of Oregon, after 1898, will require four courses of six months each from physicians who wish to practise in that State. There is not only a prolongation of the period of study as the effect of these laws, but there is also an increased demand for a preliminary education, the establishment of new professorships, and more exacting examinations for the degree. Of all agents distinctly bringing about this change, the Illinois State Board of Health, and especially its secretary, the late Dr. John H. Rauch, deserve the highest consideration.

Let us now consider the recent efforts in Massachusetts. In the address, previously referred to (p. 611), it is stated that all laws relating to the licensing of physicians by the State of Massachusetts were stricken from the statutes in 1859. The influence of the homœopathists in bringing about this result was obvious, but a number of them still retained their membership in our Society. They were inoffensive, but the feeling against homœopathy was so strong in the minds of certain members that, in 1870, a protest was made by some of the latter against the admission to the American Medical Association, then meeting in Washington, of delegates from the Massachusetts Medical Society. The Association voted, in effect, "that the Massachusetts Medical Society voluntarily and improperly furnishes shelter and gives countenance to irregular practitioners to such an extent as to render it unworthy of representation in the General Assembly of American Physicians."[43]

At the annual meeting of our Society, May 24, 1870, the following vote, "amid much confusion," was passed:

"*Resolved*, That the Massachusetts Medical Society hereby expels from fellowship all those who publicly profess to practise in accordance with any exclusive dogma, whether calling themselves homœopaths, hydropaths, eclectics, or what not, in violation of the code of ethics of the American Medical Association."[44]

This vote, however, had no legal force, since no member could be expelled except after a trial in conformity with the by-laws. But Dr. Cotting, at the Councillor's meeting, June 6th, 1871, offered the following preamble and resolutions, which were adopted by the Council, and on the following day by the Society:

"*Whereas*, The Massachusetts Medical Society has always endeavored to make, as its charter emphatically enjoins, 'a just discrimination between such as are duly educated and properly qualified for the duties of their profession and those who may ignorantly and wickedly administer medicine,' while at the same time it has ever acted in accordance with the 'liberal principles' of its foundation, and shows itself ready to examine and to adopt every suggestion, from whatever source, promising improvement in the knowledge and treatment of disease;

[1] The Annual Discourse before the Massachusetts Medical Society delivered June 13, 1894.

[43] Proc. Mass. Med. Soc., 1871, 204.
[44] Loc. cit., 1870, 159.

"*And, whereas,* It is alleged that some of its Fellows, in opposition to the spirit and intent of its organization, consort, in other societies or elsewhere, with those whose acts tend 'to disorganize or to destroy' the Society;

"*Therefore, resolved,* That if any Fellow of the Massachusetts Medical Society shall be or shall become a member of any society which adopts as its principle in the treatment of disease any exclusive theory or dogma (as, for example, those specified in Art. I. of the By-laws of this Society), or himself shall practise, or profess to practise, or shall aid or abet any person or persons practising, or professing to practise according to any such theory or dogma, he shall be declared to have violated the By-laws of the Massachusetts Medical Society by 'conduct unbecoming and unworthy an honorable physician and member of this Society.' By-laws, VII., § 5.

"*Resolved,* In case the Society concur with the Councillors in the foregoing resolution, that the President of the Society shall appoint a committee of five Fellows (to hold office one year and until others are appointed) to bring before a Board of Trial any Fellow who, three months from this date or after, shall be found chargeable with the offence set forth in the foregoing resolution.

"*Resolved,* That, after concurrence by the Society, the foregoing preamble and resolutions shall be printed, and a copy sent to every Fellow of the Massachusetts Medical Society.

"*Resolved,* That a committee of three be appointed by the chair to report the action of the Councillors on the foregoing preamble and resolutions to the Society, to-morrow, for concurrence."[45]

A board of trial was appointed; it reported in 1873, 1875 and in 1877, in each of which years a certain number of the homœopathic members were expelled until all were thus disposed of.

In the meantime, as already stated, successful efforts were being made to secure the legislative control of medical practice in various States. Their success depended upon the recognition of the principle that no attempt should be made to interfere with the chartered rights of existing medical societies. The action of our Society towards its homœopathic members was based on the view that their "conduct was unbecoming and unworthy an honorable physician." It, therefore, could not, then, consistently unite with the homœopathic society in favoring a law which should place both on the same level.

But the need of discriminating between educated and honorable physicians and the reverse was strongly felt by individual members of the Society, and the earlier attempts at securing legislation were initiated by them.

In 1877 a bill[46] was introduced by Mr. Ewing of Hampden, and was entitled "An Act to regulate the Practice of Medicine and Surgery in the State of Massachusetts." It provided that each and every existing chartered medical society shall elect censors, with authority to examine and license practitioners of medicine, surgery and midwifery. The license was to be valid for a year only, and was to be furnished on presentation of a medical diploma or satisfactory certificate of examination from an authorized board. The certificate of license was to be recorded by the county clerk, and might be revoked for cause. The penalty of practising without a certificate was from $50.00 to $100.00 for the first offence, from $100.00 to $400.00 for any subsequent offence, and fees for services rendered could not be collected by law.

This bill was intended to prevent the practice of medicine by uneducated persons, without, however, establishing any common or definite standard, and required merely the verification of certificates. It was referred to the Committee on the Judiciary, who reported against the bill,[47] and it was rejected. A month later another bill, relating to medicine and pharmacy, was presented, and was referred to the next General Court.[48]

In the following year the same bill was again brought before the Senate,[49] and was referred to the Committee on Water-Supply and Drainage. They reported, February 20, 1878, that it ought not to pass, and it was rejected. A similar bill[50] "to regulate the Practice of Medicine and Surgery in the City of Boston" was also referred to the Committee on Water-Supply and Drainage. The clause relating to the inability to collect fees by law was omitted. It was expressly stated that veterinary surgeons, exclusive practitioners of the Thomsonian or botanic system of medicine, clairvoyants or healing mediums, not assuming the title of doctor, physician, surgeon or midwife, persons practising gratuitously, and those not occupying an office or place of business for the practice or advertisement of medicine, surgery or midwifery in the city of Boston, were exempt from its provisions.

The practical effect of this bill was to limit the use of the title of doctor, physician, surgeon or midwife to persons of some degree of education, but the difference in standard might be extreme. It was less restricting than its predecessor. The committee reported leave to withdraw, but a minority recommended its passage. This bill also appears as House, No. 122, submitted in reply to a petition from the mayor of Boston, for an order relative to regulating the practice of medicine and pharmacy in the city of Boston. The same minority, as before, of the Committee on Water-Supply and Drainage, recommended its passage, but leave to withdraw was voted, March 15, 1878.

In 1880, Governor Long, in his inaugural address, stated that the necessity of protecting the community against medical impostors had been urged upon his attention, and he referred it to that of the legislature. At this time the health department of the American Social Science Association had its headquarters in Boston, and a number of the younger Fellows of the Massachusetts Medical Society were among its members. Through their initiative, a powerful effort was made in the name of the above association to secure a law to regulate medical practice. Dr. E. W. Cushing, of Boston, at a meeting of the Suffolk District Medical Society early in the year, explained[51] the steps which had been taken and the provisions of the bill. He stated that it had been prepared after consultation with eminent lawyers and representative physicians. The experience of other States had been utilized in its preparation, and the final draft met with the approval of the leaders of the homœopathic and eclectic medical societies. It was supported by eminent citizens of Massachusetts in Boston and elsewhere. It provided for the appointment, by the Governor and Council, of a board of medical registration composed of eight physicians and one dentist. The former were to be selected from the incorporated medical societies of the State in proportion to the whole number of members

[45] Proc. Mass. Med. Soc., 1891, 201-216.
[46] Senate, No. 46.
[47] Senate, No. 119.
[48] Senate Journal, 1877, 255.
[49] Senate, No. 67.
[50] House, No. 86.
[51] Boston Medical and Surgical Journal, 1880, cii, 180.

in each. This board was to examine, in medical subjects exclusive of therapeutics, applicants for a license to practise medicine, dentistry or midwifery. All members of the State medical societies incorporated at the time of the passage of the act were to be exempt from examination. Also all practitioners in the State, of one year's standing, having an approved diploma or license; all practitioners of good moral character and reputation having practised in the State for ten consecutive years; non-resident practitioners with an approved degree or license, and students of incorporated schools rendering gratuitous services. Licenses could be refused or revoked for cause. The penalty for practising without a license was a fine not exceeding five hundred dollars.

This bill was referred to the Committee on Public Health, which held six hearings, and reported "An Act relating to Practitioners of Medicine,"[52] providing that persons offering or advertising to practise medicine, surgery or midwifery, without a reasonable degree of learning, skill and diligence therein, shall be fined not exceeding five hundred dollars. Another provision was that persons professing to heal or cure disease in whatever manner, shall not assume the title of doctor, or of doctor of medicine, without having received the degree of doctor of medicine from a reputable chartered medical institution, under penalty of a fine not exceeding five hundred dollars. There were exempt from this provision persons who had used the title for ten years in the State, and members of any medical society of the State lawfully exercising the power to examine and approve its members before admission.

The bill was rejected by a very large majority in the House. This attempt of the Social Science Association to protect the community against medical impostors was defeated, according to Dr. Granger,[53] largely because of counter-petitions and complaints that the law was intolerant and exclusive, for the benefit of the few, and an interference with the rights of the many. The opposition was determined and powerful. It comprised some of the oldest and most honored physicians, many educated and intelligent citizens, all the quacks and their friends, and was supported by many newspapers, and advocated by eminent counsel.

In 1882, Governor Long, in his veto of the bill to "regulate the practice of dentistry," stated: "It would perhaps be better worth while to consider the expediency of a general statute to the effect that any person pursuing a business or profession without sufficient skill therein shall be punished. Such a statute, in the hands of judge and jury, would never work injustice, and yet would be ample for those exceptional cases of imposition, on the strength of which vicious special statutes are urged from year to year."

This suggestion from Governor Long was in harmony with the provision of the bill of 1880. It was eminently necessary in the practice of medicine, since at that time, the ruling of Chief Justice Parsons in the case of the Commonwealth *v.* Samuel Thomson was generally held to be sound law. As has already been stated,[54] this ruling was replaced in 1884 by that of Judge Holmes. It was urged by Mr. Benton, in his argument before the Committee on Public Health in 1885, against the petition of the Massachusetts Medical Society for a law to regulate the practice of medicine, that the latter decision made further legislation unnecessary. He says:

"The present law is clear and ample. A man or woman who assumes to practise the healing art impliedly contracts that he or she has sufficient skill and knowledge to do the thing which they assume to do, to cure the disease which they assume to treat, and no other. And if he or she does not have it, they are liable in damages for all the consequences that result from the lack of knowledge and skill. If he or she is grossly or presumptuously ignorant and negligent, and a person is thereby killed or injured, he or she is liable for manslaughter or for assault."

Even with this interpretation of the law, the security to the public is insufficient. As has already been shown, the cases of imposition are not so exceptional as assumed by Governor Long, neither is the victim nor his or her friends always conscious of it or competent to judge of the skill or knowledge of the medical adviser. None are more aware of the defenceless state of the public in these respects than physicians.

The next attempt was made in the name of our Society. In June, 1884, on motion of Dr. H. O. Marcy, it was voted[55] that a committee be appointed by the President of the Massachusetts Medical Society to secure, if possible, an act to protect the people from ignorant and incompetent practitioners of medicine. A committee of sixteen was appointed, Dr. Townsend, of Natick, being the chairman. This committee was subsequently strengthened by the addition of Drs. G. C. Shattuck, Cotting, Lyman, H. W. Williams and Hosmer, as a special committee to aid that of the Society in its petition.

A hearing was given, lasting four days, was largely attended, and excited much public interest. It was shown as probable that there was in Boston, at the time, "greater ignorance and criminality, disguised under the name of the profession, than in any other city of the Union. Even houses of ill-fame are covered under the name of a physician."[56]

The committee reported[57] June 3, 1885, "An Act to regulate the Practice of Medicine," but one member dissenting. It provided for a board of nine examiners, not more than four to belong to the same medical society or school of medicine, who were to register as qualified physicians all graduates of legally chartered medical colleges or universities having the power to confer degrees; also all practitioners of medicine of ten years' continuous practice in the State. All other applicants for registration were to be examined, and at the close of a year all applicants whatsoever were to be examined. The examination was to be elementary and practical, and to embrace the subjects of anatomy, surgery, physiology, chemistry, pathology, obstetrics and the practice of medicine, exclusive of therapeutics. Persons practising medicine or surgery without being registered were liable to a fine of not less than fifty nor more than five hundred dollars.

The bill was refused a third reading in the House by an overwhelming majority. According to the *Boston Medical and Surgical Journal*,[58] despite the origin of the movement at the annual meeting of the

[52] Senate, No. 198.
[53] Buffalo Med. and Surg. Journal, 1880-81, xx, 97.
[54] Page 291.
[55] Proceedings of the Massachusetts Medical Society, 1884, 68.
[56] Dunglison and Marcy, College and Clinical Record, 1885, vi, 225.
[57] House, No. 445.
[58] 1885, cxii, 203.

Society, and its advocacy, both by a general and special committee, "the sentiment of the great majority of the Society was one of entire indifference. But a small portion thought it worth while to put themselves on record at all."

Dunglison and Marcy state:[59] "It was presented during the last hours of a heated, long drawn out political contest, when time could not be given for its proper consideration, and, loaded down with amendments offered for its destruction, it failed of passage."

Four years later the attention of the legislature was again called to this subject through the labors of Dr. J. Frank Perry, at the time editor of the *Journal of Health*. The draft of the bill then presented[60] required that licenses to practise should be given by the Board of Health to medical graduates of legally chartered colleges, to members of at least one year's standing of incorporated medical societies, and to practitioners who had been in practice for ten years. All other applicants were to be examined by the censors either of the Massachusetts Medical Society, the Homœopathic Medical Society or the Eclectic Medical Society, and the Board of Health was to license the successful candidates. Violation of the law was punishable with a fine not exceeding $500.00, or imprisonment not exceeding six months. Three petitions were presented in favor of the object of this bill, and twenty-six against it.

The subject was referred to the Committee on the Judiciary, who reported, May 23, 1889, a bill[61] entitled "An Act to Regulate the Practice of Medicine and Surgery." It provided that practitioners should file an affidavit of their qualifications with the city or town clerk, who should give a certificate stating the substance of the facts set forth in the affidavit, which certificate was to be conspicuously displayed in the practitioner's office. Violation of the provisions of this act was to be punished by a fine not exceeding one thousand dollars, or imprisonment not exceeding one year, or by both fine and imprisonment.

This bill was sent up for concurrence by a vote of eighty-two to fifty-nine, and was defeated in the Senate. Dr. Perry informs me that he used every effort to defeat this bill in the Senate, since he was determined to obtain a good bill or none at all.

In 1890 the attention of the legislature was again called to the subject by Dr. George S. Wilson, of Boston, representing the Working People's Aid Society, and other workingmen's organizations. The matter was referred to the Committee on the Judiciary, who reported it inexpedient to legislate.

In the following year Dr. Wilson succeeded in obtaining a hearing before the Committee on Public Health, and presented the draft of a bill "to establish the registration of Medical Degrees." No one was to use the title of "Doctor," or of "Doctor of Medicine," or any abbreviation thereof, unless possessing a diploma from some reputable college or institution legally empowered to confer the degree. At the end of the year, after the passage of the act, no medical college was to be considered reputable which required less than three years of medical study and three annual courses of lectures of not less than twenty weeks each. The penalty was a fine of $50.00 to $200.00 for the first offence, and from $100.00 to $500.00 for each subsequent offence, or imprisonment from thirty to ninety days, or both fine and imprisonment.

The committee reported March 24, 1891, a bill[62] entitled: "An Act to regulate the Practice of Medicine by the Registration of Practitioners," the provisions of which were similar to those of the bill reported in 1889. This bill was returned to the committee, slightly amended, and again reported April 7, 1891.[63] Dr. Wilson states that, in his opinion, the bill was so unsatisfactory to the working people, that he "went to the State House and saw several influential members, who succeeded in killing the bill." It was refused a third reading in the House by a vote of eighty-six to forty-two.

In the present year, Governor Greenhalge, in his address to the legislature, makes the following request:[64]

> "I ask you also to consider the expediency of requiring that practitioners of medicine be registered in somewhat the same manner as pharmacists are now registered. In every State of the Union, except five, such a system of registration has been established, and it cannot fail to protect the public, and at the same time help to maintain a high standard among medical practitioners."

Pharmacists are registered by a board of registration appointed by the Governor and Council. The candidate is examined, receives a certificate, if qualified, and the certificate must be conspicuously displayed in his place of business. Unregistered pharmacists transacting the business of pharmacy are punished by a fine not exceeding fifty dollars.

The above section of the Governor's address, also a bill to regulate the practice of medicine and surgery by the registration of practitioners,[65] were referred to the Committee on Public Health. They reported, three members dissenting, the bill[66] "to provide for the Registration of Physicians and Surgeons." This bill was essentially the same as the House bill (No. 445) of 1885, and corresponded very closely with the act of the same year to establish a Board of Registration of Pharmacy. As a substitute for this bill, Senator Kittredge offered another,[67] which is practically the bill recommended in 1889,[68] with a smaller penalty and a clause making it a misdemeanor to append, without authority, the letters M.D. to the name of the person. The committee's bill was advocated in the Senate by Dr. Harvey, and was passed to be engrossed; Mr. Kittredge's substitute being defeated by a vote of twenty-two to six. The bill[69] as passed by the Senate differs from the committee's bill, in containing, as amendments, a clause preventing more than three members of the board being at one time members of any one chartered State medical society; also that practitioners of three years' continuous practice before the passage of the bill should be entitled to registration; also, that all applicants with the degree of M.D. from a legally chartered medical college or university having the power to confer degrees in medicine in this commonwealth shall be registered in the future without examination.

Finally, the bill was so amended as not to apply "to clairvoyants, or to persons practising hypnotism, magnetic healing, mind cure, massage methods, Christian science, cosmopathic or any other method of

[59] Boston Med. and Surg. Journal, 1885, cxii, 203.
[60] New York Medical Journal, 1889, xlix, 195.
[61] House, No. 487.
[62] House, No. 292.
[63] House, No. 396.
[64] Address, p. 39.
[65] House, No. 137.
[66] Senate, No. 155.
[67] Senate, No. 178.
[68] House, No. 487.
[69] Senate, No. 263.

healing," provided such persons do not advertise or hold themselves out by the letters M.D., or the title of doctor, meaning doctor of medicine.

Senator Kittredge claimed that there were four thousand remonstrants against the bill, and none but doctors in its favor.[70]

Some of the opponents of the attempt to secure the legislative control of the practice of medicine in Massachusetts have placed themselves on record in the public press. The personal characteristics of many of those present at the hearings have been thus described:[71]

"What a collection of them there was in the Green-room at first, and afterwards in the large hall of the House of Representatives, to which an adjournment was necessary on account of the crowds! Medical blacklegs of all kinds, deceitful clairvoyants, long-haired spiritualists, necromancers, wizards, witches, seers, magnetic healers, pain charmers, big Indian and negro doctors, abortionists, harpies who excite the fears and prey on the 'indiscretions' of the young of both sexes, who treat venereal diseases with the utmost secrecy and despatch, who have good facilities for providing comfortable board for females suffering from any irregularity or obstruction, who sell pills which they are very particular to caution women when pregnant against using; *et id genus omne*. Some of them looked sleek, well fed and prosperous; others seemed to have come from the very slums of destruction. Most of them had a coarse, animal, degraded look."

(To be continued.)

Original Articles.

CASES OF TRAUMATIC HEADACHE.[1]

BY CHARLES F. FOLSOM, M.D.

IN studying the various causes of headache, I have grouped together six similar cases due to traumatism, which I report to-day. Others, where the injury was to the nose, are not included, inasmuch as the cause of the symptoms in them was complex.

CASE I. C. H., aged seventeen years, with healthy antecedents, strong, well developed and nourished, and sensibly brought up, was referred to me in October, 1890, by Dr. Hasket Derby, who had carefully examined his eyes and found them without defect. Four years previous to my seeing him, he was thrown from a horse and struck by the freshly-shod hoof of another horse, over the upper and middle region of the left parietal bone. There was a large irregular cut in the scalp which bled freely and finally healed by granulation. There was no unconsciousness after the accident and there were no cerebral symptoms at that time.

A year later, he began to have headache now and then, which was not severe, but which, still a year later, had become very bad and more frequent. These headaches began just back of the left eye, a couple of inches anterior to the cicatrix, extended over the temporal region, and finally involved the whole head. They lasted several days and were quite disabling. They were not affected in a causative way by the use of the eyes. The headaches became more and more troublesome until the summer of 1890, when they were almost constant, although the boy was at the time leading an outdoor life on a farm where he was passing his vacation. He made as little as possible of his symptoms, as he was very desirous of returning to school, which he did in October. He was not able to study and was sent back to me by his teacher as being in constant suffering. From his mother, whom I then saw for the first time, I learned that he had been obliged to give up the active occupations and amusements of boyhood, and walked about, and especially up and down stairs, with the greatest care in order to avoid the least jar, which made his head much worse. He could not study or read and there was no let-up to the pain which varied from time to time in degrees of severity. There had never been any convulsions nor vomiting.

Physical examination of the patient was negative, except that over the upper middle part of the left parietal bone there was an irregular cicatrix, quite tender on pressure, about an inch and a quarter long, and three-sixteenths of an inch wide at the widest part. The boy had the general appearance of health, except that his face usually had the expression of pain. He was unnaturally irritable, and disagreeable to himself and to others.

After four years of medical treatment, it did not seem wise to try that any further. I advised that the cicatricial tissue should be cut out and that trephining or further exploration should depend upon the indications — an opinion in which Dr. Weir Mitchell concurred after seeing the patient in consultation.

The operation was performed by Dr. Warren, October 29th, in the presence of Dr. Weir Mitchell, Dr. C. B. Porter and myself, but nothing was found to justify any apprehension of possible serious injury to the brain. There were three small indentations in the external table of the skull and trephining showed some reddening of the dura with adhesions to the adjacent bone. Dr. W. F. Whitney found, on microscopical examination, diffuse hyperostosis of the skull, and interstitial neuritis in the cicatrized tissue.

The patient made a complete recovery, has been able to resume his studies, and has remained entirely well.

CASE II. Miss ——, aged twenty years, was seen by me in January, 1891, complaining of persistent dull headache, obstinate constipation which did not yield to ordinary remedies, and of paroxysms of severe pain throughout the head, with mental confusion beginning a few days before menstruation and lasting a week or more.

The patient's health had otherwise been excellent except for debility and some neurasthenic symptoms of three years' duration, which began a few months before the appearance of her headaches, and which had been attributed in part to worry and in part to a life involving some exposure on a cattle ranch in the West, with food not altogether suited to her somewhat exacting needs. She had lost twenty pounds in weight.

The family history was negative.

In July, 1884, the patient was kicked in the head over the upper and posterior portion of the right temporal bone by a well-shod horse. There was a large irregular scalp wound which got filled with sand and gravel. The wound was tied up and healed by granulation. There had been no unconsciousness or cerebral symptoms of any kind. There was no headache of consequence until nearly four years later, in 1888,

[1] Read at the meeting of the Association of American Physicians, Washington, D. C., May 29, 1894.

[70] Boston Daily Advertiser, April 18, 1894.

[71] New England Medical Gazette, 1880, xv, 65.

Address.

THE LEGISLATIVE CONTROL OF MEDICAL PRACTICE.[1]

BY REGINALD H. FITZ, M.D., BOSTON.

(Continued from Vol. cxxx, No. 26, p. 641.)

EMINENT and able counsel have been repeatedly employed to represent the opposition. The means by which counsel may be procured, and attendance at the hearings ensured, is suggested in the circular of which a copy is herewith given. It is headed by the names of "Prof. J. Rodes Buchanan, M.D., Pres., San Francisco, Cal., and J. Winfield Scott, Sec'y, Boston, Mass., Publishers and Gratuitous Distributors of Literature devoted to Public Health, Constitutional Liberty and Reform Practice."

The document contains in a seal or device the words, "National Constitutional Liberty League, Boston, Mass., Incorporated October 30, 1888." It reads as follows:

BOSTON, MASS., 1894.

DEAR FRIEND OF FREEDOM AND JUSTICE: — A critical emergency is upon us. Liberty and life are trembling in the balance. The urgency of the legislative situation impels to a third and final appeal. A hearing on one of the three threatened bills has actually been appointed and adjourned because we were unprepared — had not sufficient funds to secure a competent attorney. The bill prohibits, absolutely, the practice of all save M.D.'s. Only by the strictest economy, pinching here and skimping there, can we conduct triumphant State campaigns upon a paltry $5,000 or $6,000. A successful political campaign, covering identical territory, and effecting similar results, costs five or six times as much. Think of it! The hearing set for the 21st, and less than one-half the necessary amount guaranteed! Unless the recipients of this call, respond promptly and generously the would-be remonstrants must suffer the second hearing to go by default also, and the medical monopolists allowed to win an easy victory. The few who have heretofore subscribed thousands annually, feeling they have already contributed more than their share, are this year giving only hundreds. This deficiency can easily be made good by numerous small contributions of $60 and $120 payable in monthly instalments of $5 or $10. True, times are hard, but they will be harder still for progressive practitioners if either of the three bills pass, as they surely will unless a common fund and common fight prevents. Will you contribute a small percentage of your monthly income towards the defence of your own rights and those of your patients, or supinely surrender your entire practice to your rivals? They are politically prepared and financially equipped for a struggle worthy of a better cause. If those who have NOT responded to our former appeal will now do so as promptly and generously as those who HAVE, we will realize a sufficient sum to conduct a successful campaign. Pardon us if we repeat:

Precious time is swiftly passing. Prompt action is urgent — indispensible — imperative. Delay is dangerous. Don't eat or sleep until you have sent in your pledge and started the twin petitions. We URGE you with all the earnestness and emphasis possible, to promptly return one of the enclosed Free-Will Offering forms signed for the largest sum you can possibly pay monthly during 1894. Unless immediate responses encourage the undertaking you will not be called upon for any part of the pledge. Won't you contribute cash or pledge monthly payments for a full year AT ONCE? We urge — we beg you to come forthwith to the rescue with Pledges and PETITIONS. Let us not surrender without a struggle. As so very much depends upon YOUR response we earnestly hope you will do your very best and persuade others to do likewise. Remember that in ten years our National League has conducted over twenty campaigns in various States and never been beaten. And we will win this year too, if ample munitions are supplied. Yours for liberty and justice,

J. WINFIELD SCOTT, Sec'y.

On the back of this document is printed:

RALLY TO THE RESCUE.

Attend the hearing Wednesday and cast your voice and influence for liberty and justice. Let every one opposed to medical monopoly prove it by their presence. Bring your friends with you. COME EARLY.

Accompanying this remarkable document were the two forms mentioned, one in black, the other in blue ink. A copy of the latter is here given:

No. $60.00. 1894.

FREE WILL OFFERING.

In consideration of the praiseworthy past educational services and reformatory efforts of the NATIONAL CONSTITUTIONAL LIBERTY LEAGUE, and in encouragement of its proposed vigorous campaign against medical legislation in Massachusetts this year, we herewith remit $, and hereby and cheerfully agree to pay each month during 1894 to J. WINFIELD SCOTT, Sec'y, at Room 30, 383 Washington St., Boston, Mass., the sum of Five Dollars.

Name,
Complete address,

The statement of previous efforts is substantiated by the following extract from the closing argument of Charles E. Gross, Esq., before the Judiciary Committee of the Connecticut Legislature in 1893:[72]

Before the first hearing, Mr. Chairman, a circular was sent broadcast through this State in certain lines of medical practice. . . . Let me continue the circular:

NATIONAL CONSTITUTIONAL LIBERTY LEAGUE,
INCORPORATED, OCT. 30, 1888. BOSTON, MASS.
PUBLISHERS AND DISTRIBUTORS OF MEDICAL LIBERTY LITERATURE.

BOSTON, MASS., 1893.

Dear Friend of Freedom: — I am reliably informed that a monstrous medical law is likely to be enacted by your Legislature.

"Forewarned is Forearmed." We beseech you to bestir yourself instantly and incessantly in behalf of constitutional liberty, until this medical monopoly measure is overwhelmingly defeated by a righteously indignant populace. If you would profit by our years of successful experience, and desire our coöperation, begin the circulation of the accompanying remonstrance forthwith. When you have secured from one to five hundred influential signatures, with addresses and occupation, copy the addresses complete and send to us. Then mail the remonstrance to your Representative or Senator.

Equipped with our league literature, the majority of them could, and would (with secret exultation), defeat the proposed medical bill with neatness and dispatch. Therefore it is of the utmost importance that your Senator and Representative be thus immediately supplied with the medical liberty literature described by the enclosed circular.

Kindly keep us constantly advised of what you are doing and the progress of the bill.

Yours for constitutional liberty,
J. WINFIELD SCOTT, Sec'y.

. . . . . .

AN INVITATION.

P. S. — Since dictating this letter we have suggested, and influential citizens secured, the postponement of the hearing until Wednesday, March 8th, in the Superior Court room.

It is of the utmost importance that citizens who have been cured by other than "regular" M.D.'s attend the hearing and testify regarding their treatment.

It is equally important that those who would maintain their constitutional liberty of choice of physician or healer personally appear to signify their determination to defend this inherent and inalienable right.

We earnestly hope that you will attend, and persuade as many others as possible to go, thus by your presence casting

[1] The Annual Discourse before the Massachusetts Medical Society delivered June 13, 1894.

[72] Proceedings of the Connecticut Medical Society, 1893, 286.

your personal, moral influence in behalf of freedom and justice. Write us at once at Hartford, Conn., if you can come, and tell us how large a delegation you can probably muster. As you value your medical liberty, we beseech you not to neglect the important duties outlined herein. Remember that health and happiness, and human life, depend upon the defeat of this medically monopolistic measure. Dare to do your duty. J. W. S.

A THUNDERBOLT OF CAPTIVATING ELOQUENCE AND SUBLIME ORATORY.

(*In Press.*)

Mr. Joseph L. Barbour's unanswerable argument, March 8, 1893, against medical legislation, before the Legislative Judiciary Committee of Connecticut, was a matchless masterpiece. It rightfully elicited round after round of irrepressible applause. The widespread distribution of this powerful, persuasive plea for the people will kill the bill and endear their champion to the hearts of every medical liberty-loving citizen.

Every legislator, and every citizen whose influence is desirable at the State House, should be supplied. Regular retail price, 25 cents.

Procure and distribute all you can, and persuade every one else to do likewise.

. . . . . .

Then follows another:

Doctor: – One more word of warning!

If you were as familiar as I am, after years of court and legislative experience in nearly every State, with the cunningly devised tricks and traps of allopaths to ensnare and subjugate homœopaths and eclectics, I believe you would look before you leap into the ingenious and inquitous snare set by the Connecticut medical bill.

Are you ready for this?

If not, and you can't come to the hearing March 21st to protest, write us at once (at 152 Allyn Street, Hartford, Conn.) a letter denouncing the medical bill, and I will have it read before the committee.

Also write your members of the Legislature forthwith that you hope they will oppose the bill by voice and vote.

Sincerely yours for constitutional liberty,
J. WINFIELD SCOTT, Secretary.

Next came this:

AN OPEN LETTER.

Dear Devotee of Constitutional Liberty: - The quarrel of the M.D.'s before the Judiciary Committee at Hartford, Wednesday, March 8th, wastefully consumed all the time, save that so admirably improved by the splendid speech of Joseph L. Barbour in behalf of medical liberty. The people themselves are to be heard by the same committee, Tuesday afternoon, March 21st.

We are told your presence and influence will aid the cause of medical liberty Come.

In the meantime it is of the utmost importance that remonstrances be immediately circulated and extensively signed by influential citizens, and promptly placed in the hands of local representatives and Senators, together with our $1.00 package of medical liberty literature.

We earnestly hope that you will attend and persuade as many others as possible to go, thus by your presence casting your personal moral influence in behalf of freedom and justice. As you value your medical liberty, we beseech you not to neglect the important duties outlined herein. Remember that health and happiness and human life depend upon the defeat of this medically monopolistic measure. Dare to do your duty.

J. WINFIELD SCOTT, Secretary.

P. S. After the hearing a decidedly necessary and important conference to consider WHAT TO DO NEXT has been called to meet at 152 Allyn Street, at 7.30 sharp. Every so-called "irregular" practitioner should arrange to attend and help devise further plans for the defeat of the bill and for future protection should it pass. J. W. S.

Now coming down a little later:

PUBLISHERS AND DISTRIBUTORS OF MEDICAL LIBERTY LITERATURE.

BOSTON, MASS., 1893.

Dear Co-worker: — At the hearing at Hartford, March 21st, the quacks who are clamoring for "protection" accused the so-called irregulars of malpractice, and the hearing was adjourned to afford them an opportunity to prove it.

It is evident this battle must be carried through the Senate and House. The doctors are, and have been, lobbying the Legislature for some time.

Tuesday evening's conference, to consider what to do next, adjourned to meet Monday evening, March 27th, at 7.45 o'clock, with Mr. Patterson, Room 22, "the Goodwin."

Every progressive practitioner is vitally concerned, and should attend without fail. Address until further notice,

J. WINFIELD SCOTT, Secretary,
152 Allyn Street, Hartford, Conn.

The last circular is as follows:

NATIONAL CONSTITUTIONAL LIBERTY LEAGUE,
INCORPORATED OCT. 30, 1888. BOSTON, MASS.
PROFESSOR J. RHODES BUCHANAN, M.D., President.
J. WINFIELD SCOTT, 383 WASHINGTON ST.,
BOSTON, MASS., Secretary.

BOSTON, MASS., 1893.

Dear Devotee of Constitutional Liberty: - The next page explains the origin and utility of "Allopathic Czar Parties." They are potent and popular educational entertainments — admirable first steps towards a Local Liberty League — leading to a Chatauqua-like course of studious reading. We appeal to you to send stamps for one or more copies of "Allopathic Czars" and invite a score of neighbors in to enjoy the fun. At the close, when every one is in a rollicking good humor and full of enthusiasm, appoint another meeting and take a five or ten cent collection for our entire League Library: price only $1.00 — less than cost.

Hoping to hear favorably and frequently from you, we remain yours for health, humanity and constitutional liberty.

Earnestly yours,
J. WINFIELD SCOTT, Secretary.

The following statement[73] concerning the source of opposition to medical legislation in Georgia may be interesting. It seems that in November, 1892, the preliminary steps were taken leading to the preparation of a bill which was submitted to the legislature then in session. It passed the Senate by a vote of thirty-five to nine. The opposition was aided by a lawyer hired to oppose this bill by a noted itinerant practitioner of Boston. It is, furthermore, an open secret that the services at the State House of an eminent lawyer conspicuously opposed to one of the proposed bills were paid for by a person whose name is to be found in the Boston Directory among the physicians of Boston, not designated as belonging to any of the incorporated medical societies.

With your permission, attention will now be directed to what may be regarded as the essentials of a law regulating the practice of medicine, and to what extent they are present in the Massachusetts law now before the legislature. It should not be forgotten that it is largely owing to the efforts of a Fellow of the Massachusetts Medical Society, Dr. Edwin B. Harvey, of Westboro', that the progress of this bill has been promoted.

That the State may properly control the practice of medicine in the interest of the public, it is desirable that the laws should be so constructed that their provisions may be carried out in the simplest and most direct way possible. The title of the act is not an important feature if the purpose is clear, and whether physicians are licensed, registered or regulated, is less essential than that they should be duly qualified by intelligence, education and morals. The necessary degree of intelligence and education must vary with the intellectual development of the people at the time; and it is useless to make the standard so high as to be beyond the reach of a considerable minority, or so low that the majority consider it worthless. Neither should the law become a dead letter, and no legislation at all is better than laws forgotten or not enforced.

The State must assign the duty of regulating medical practice to trustworthy citizens, properly qualified. These are necessarily physicians, although they in turn may be supervised by a smaller board, as that of the Regents in New York, the Medical Council of Pennsylvania, or the State Board of Health in Connecticut. It is unwise, and, in most States impracticable, to place this authority in the hands of any single medical society, owing to the fact that all incorporated

[73] Atlanta Medical and Surgical Journal, 1893, x, 129.

State societies are equal in the eyes of the law, and each is of so much influence as to antagonize the limitation of control to the other.

In Alabama and in North Carolina alone has it been found possible to entrust this power to a single State society. In the former, in 1890, Dr. Cochran, of the Board of Censors, says:[74] "We have a very few homœopathic practitioners in Alabama; but a considerable number of doctors, who, graduated in eclectic schools, have availed themselves of the advantages we have to offer them, and have become good working members of our organization." In North Carolina, the law making it the duty of the State Medical Society to examine and license all practitioners of medicine and surgery was passed in 1858–9, at a time when but little opposition from other sources was likely to have existed. In 1880, as a result of the law, there was a very small number of irregular practitioners in the State.

The experience of the vast majority of the States of the Union is in favor of the appointment of the controlling board by the Governor of the State. It has been urged that this will tend to make the position political and partisan. This effect may be modified in some measure by providing that at least one member shall be annually changed. In some States it is provided that appointments shall be made from nominees of incorporated State societies. Medical societies, however, are not free from the possibilities of partisanship. Certainly, medical appointments in the State of Massachusetts by its Governor and Council have rarely been open to the charges of personal or political favoritism prevailing over conspicuous merit.

A more important question relates to the transfer of the control to the State Board of Health or to an especial board. The former exercises this authority in comparatively few of the States, although with conspicuous success in Illinois. State Boards of Health, however, are not exclusively medical boards. Questions which come before them are of so various a character that lawyers, engineers, merchants and mechanics, as well as physicians, are needed in their deliberations. The regulation of medical practice relates solely to qualifications, of which physicians are the best competent to judge; and the question of determining these qualifications would, in the end, necessarily be assigned to the medical members of the board. These members should be especially adapted to the purpose, and might be unfitted for the general duties of Boards of Health.

They should be selected as intelligent, educated, fair-minded, honest and upright representatives of the entire profession. They should be practitioners and not teachers, that there should be no possibility of the suggestion of favoritism in the treatment of an especial set of applicants. The members of the board should have been in practice for a number of years, that their inquiries into the qualification of the applicant might be based less on theoretical than on practical knowledge. They should be representatives of different sections of the State, that the interests of the public in the remote villages might be equally protected with those in the most populous cities. The experience of the various States is largely in favor of the establishment of a Board of Examiners independent of the Board of Health.

The question which next presents itself relates to the composition of the board with reference to the representation of the incorported State medical societies. Shall these be represented in a single conjoint board, or shall there be as many independent boards as there are incorporated societies? From the ease with which corporations are formed in the various States under a general law, the question practically resolves itself into the representation of the three societies with the largest memberships.

If a single board is established it should have an equal or a proportionate representation of the regular physicians, the homœopathic and eclectic physicians. The establishment of a single board is objected to by some of the regular physicians, especially the older members of the profession, on the ground that it compels them to approve the licenses of homœopathists and eclectics, whom they have already opposed in every possible way as undeserving the confidence of the community. It, furthermore, makes the homœopathists and eclectics judges of the qualifications of students of the regular schools, and permits the former to combine in opposition to their license, which would destroy the advantages to be derived from the regulation of medical practice.

The homœopathists object to a conjoint board, if formed on proportionate representation, since such an apportionment would give a majority representation of regular physicians, and partisan zeal, favoritism and illiberality would result, with a tendency to diminish the number of homœopathic students. This view is advocated by Dr. H. M. Davenport,[75] who gives as an illustration the experience in Canada, where, of 1,230 licenses given in eighteen years, only 19 were given to homœopathists. He also adds that in Minnesota, in 1888, where a single board exists with a homœopathic minority, only one-fifth of the homœopathic applicants for registration "were allowed to pass." On the contrary, one of the homœopathic members of the Examining Board of that State "spoke very highly of the Minnesota law and its workings, and said he was entirely satisfied with the way the remainder of the Board conducted the examination, and with the fair way in which he was treated and allowed to conduct his examination. He considered a common Board of Medical Examiners as the best."[76] The feeling here expressed can hardly be considered to prevail among homœopathic physicians, and the argument of H. M. Paine before the Judiciary Committee of the New Hampshire[77] legislature perhaps more nearly represents their views. The latter are expressed[78] editorially as follows:

"On general principles it is a good thing to make a strong stand against medical examining boards, provided we have the strength to resist the demand for the establishment of such boards; if we have not, then it will be good politics to acquiesce to the demands, and to insist that there shall be created separate and distinct examining boards for the homœopathic profession. Under no consideration should we ever be led to accept the single board plan. . . . The greatest danger of the single board rests in the fact that a large number of students will prefer to graduate from institutions in sympathy with the majority of the examiners."

The objection to a triple board is to be found in the probability of separate standards of proficiency, which would diminish the value of the license. Candidates

[74] Page 312.

[75] North America Journal of Hom., 1889, lv, 706.
[76] North-Western Lancet, 1891, xi, 7.
[77] Hahnemanian Monthly, 1891, xxvi, 281.
[78] Ibid, 409.

rejected by one board might seek for a license from a set of examiners less exacting in their demands, unless prevented by law. The license thus obtained would be as valid as if secured by more exacting methods. If it is replied that a supervising board might be established, as in New York and in Pennsylvania, it may be said that it makes the machinery of licensing too cumbersome in requiring four boards where one would answer.

A single examining board has the advantages of simplicity, uniformity of standard, and freedom from partiality. Although appointments to it might be made which would result in friction, quarrels and dissension, the benefits to arise as regards the public are such that this method of carrying out the designs of the law should first be tried. None need serve upon it who are unwilling to act from the best of motives. And as harmony prevails in many medical boards thus constituted, in various sections of the country, equal success may be anticipated from future attempts. One safeguard should be insisted upon, either exclude the subjects of materia medica and therapeutics from examination, or make the representatives of the several schools the sole judges of the qualifications in these subjects, the applicant having the choice of the various sets of questions prepared.

It should be the duty of the Board of Examiners to consider and decide upon the qualifications of the candidates, and to grant a license to practise to the successful candidates.

What shall be these qualifications? The custom in the various States, as we have already seen, differs widely. In some, the possession of a satisfactory diploma of graduation from a medical school or institution incorporated with the privilege of granting diplomas, suffices. In others an examination is necessary. In some, a satisfactory diploma is necessary that the candidate may be examined; in others, the examination is the sole test of the qualifications. If the diploma is to be regarded as satisfactory, it must be inspected and verified. The definition of what is a satisfactory diploma must rest with the board, and what is satisfactory in one State may prove to be the reverse in another.

In the earlier days of legislative action the diploma of a regularly chartered medical school, or the certificate of a chartered licensing body as a State, county or district medical society, was regarded as satisfactory evidence of a sufficient degree of education. This led to the infamous traffic in American diplomas throughout this country and in various parts of the world, which became a national disgrace, and from which the country even now has not wholly recovered. Rival medical schools of low grade were legally incorporated, especially in the Western States, with all the rights and privileges of the best schools. Such favorable terms were offered to students that it became possible to be graduated in the course of a few months without any especial preparation. Courses of lectures were made short and examinations easy, students even being informed in advance of the questions to be asked. This corrupt sale of diplomas reached such a degree in Pennsylvania that, in 1872, a committee of the legislature investigated the subject and found that for a long time diplomas had been sold, in many instances to persons without any medical or scientific attainments whatever. An instance is given where a diploma was made out for an infant two years old at a charge of $200.00. An itinerant exhibited on street corners, and wherever he went, three diplomas from as many medical colleges in the United States.[79] John Buchanan, of Philadelphia, was the ringleader in this business. He obtained control of the charters of extinct schools, got new charters, and advertised extensively the sale of his diplomas. The courts were obliged to sustain their legality, but finally he was exposed through a reporter of the *Philadelphia Record*, to whom he sold, under various fictitious names, eight diplomas, several conferring the degree of M.D., one that of D.D., another that of D.C.L., and still another that of LL.D.[80]

The Illinois Board of Health was most instrumental in putting an end to this traffic in fraudulent diplomas. In 1880 it refused to accept as evidence of qualification the diplomas of twelve legally chartered medical colleges. In 1884[81] it showed the nature of the traffic in diplomas in Massachusetts. This State enacted a general law in 1874[82] providing that corporations might be formed by voluntary association for "any educational, charitable and religious purposes, for the prosecution of any antiquarian, literary, scientific, medical, artistic, monumental, or musical purposes, etc." Several medical schools were formed under this statute, the most famous of which was the Boston Bellevue Medical College, incorporated May 25, 1880. It was charged with illegally issuing or selling its diplomas. Its officers were arrested on the accusation of using the United States mails for illegal purposes. They pleaded in defence that they were empowered by the laws of Massachusetts to issue diplomas and confer degrees without any restriction as to the course of study or professional attainments. The United States Commissioner held the plea to be valid and dismissed the defendants. Within a fortnight "the American University of Boston" was incorporated. A few weeks later the "First Medical College of the American Health Society" was added to the medical schools of Boston. When the attention of the legislature was called to this abuse of the law it prohibited corporations organized for medical purposes under this statute from conferring degrees, or issuing diplomas or certificates conferring degrees unless specially authorized by the legislature so to do.[83] But the names of the Boston Bellevue Medical College, the American University of Boston, and the First Medical College of the American Health Society, are still to be found among the legally incorporated institutions of Massachusetts.

The importance of the inspection of diplomas is thus apparent that fraudulent diplomas may be excluded. Some of the low-grade schools have improved their facilities for giving instruction and their requirements for graduation to such an extent that the diploma after a certain date is satisfactory evidence of qualification, whereas those given in years before such a date are unsatisfactory. Not only should the diploma be acceptable, but it must also be verified. Diplomas have been lost, sold and stolen, and have been cancelled or counterfeited. It has, therefore, been found necessary for verification, that the candidate presenting a diploma as to his qualification for a license, should make an affidavit, before a person authorized to administer oaths, that the diploma is genuine, not given for money

[79] Sibbert: Trans. Med. Soc. Penn., 1880, xiii, 1, 53.
[80] New York Med. Record, 1890, xxxvii, 377.
[81] Report Illinois State Board of Health, 1884, vi, 9.
[82] Statutes, 1874, ch. 375, sec. 2.
[83] Statutes, 1883, ch. 208.

alone, nor cancelled, that the applicant is the person therein named and the lawful possessor, that it was procured in the regular course of medical instruction, without fraud or misrepresentation, from a medical school or institution legally incorporated at the time of its bestowal to grant medical degrees, having a full body of medical teachers, actually and in good faith engaged in the business of medical education, and during a definite period of time.

(To be continued.)

Original Articles.

SPINAL CONCUSSION. — TRAUMATIC SPINAL SCLEROSIS.[1]

BY PHILIP COOMBS KNAPP, A.M., M.D.,
Clinical Instructor in Diseases of the Nervous System, Harvard Medical School; Physician for Diseases of the Nervous System, Boston City Hospital.

To speak to-day of spinal concussion is proof either of ignorance or of heresy. I have perhaps examined the literature of the subject with enough care to absolve me from the charge of ignorance, but I cannot avoid the other charge. I do not, however, intend to maintain the thesis of "spinal concussion" in the strictest sense. In that sense it may be defined as a condition in which paraplegia follows injury, where the cord has sustained no gross lesion, and where the trouble may be referred to molecular changes in the finer nerve elements leading to loss of function. We cannot admit to-day that impairment of function is not attended with structural change in the cord. The brilliant demonstrations of Hodge at the meeting of the American Physiological Association in 1891, added to his previous work and the experiments of Korybutt-Daskiewicz, have taught us that even ordinary fatigue is attended with visible changes in the ganglion cells. Hence all our old notions as to functional disease must be abandoned.

The thesis which I wish to maintain is that after injuries which do not give rise to fractures or dislocation of the vertebræ, direct crushing of the cord, spinal hemorrhage, etc., we may have affections limited chiefly to the spinal cord, of insidious onset, and of grave prognosis. Hence I have chosen the old term of spinal concussion as a title for this paper, rather because it was a more striking protest against some modern views than because it was absolutely correct.

In former times it was unnecessary to maintain such a thesis as this. Everything was regarded as spinal concussion. To-day many maintain that the spinal cord counts for nothing in the so-called "traumatic neuroses." The cerebral origin of many symptoms is generally accepted. The French go still farther, and seem inclined to ascribe to all the symptoms a psychical origin, and they will speak only of "traumatic hysteria." Others still claim that most of the symptoms are due not to injury but to litigation. Furthermore, various symptoms which were once thought indicative of spinal disease, pain and stiffness in the back, difficulty of locomotion, and the like, have been found to be due to strain of the spinal muscles and ligaments and to be no indication of disease of the cord.

[1] Read before the Boston Medico-Psychological Association, January 21, 1894.

While on the one hand clinicians have differentiated many distinct affections among the "traumatic neuroses," and have shown that lesions of the spinal cord have little if any connection with them, anatomists and surgeons have sought to prove that injury can seldom if ever produce disturbances in the cord, unless it be so great as to exert absolute crushing force upon the spinal column.

Among the prominent supporters of this opinion was Watson, who collected a mass of anatomical, experimental and clinical data in support of his claim. It will be well to examine his facts and arguments with considerable care, in order to decide how thoroughly he has established his position.

Watson[2] advanced certain *a priori* arguments to show that injury to the cord, without injury elsewhere, is unlikely. These are familiar and have a certain force. "The points to which attention should be especially directed," he says, "are: (1) the protection afforded to the cord by the vertebral column; (2) the spinal cord and its coverings do not nearly fill the vertebral canal; (3) they are at no point adherent to or in contact with it; (4) the bony wall is everywhere cushioned with connective or adipose tissue, etc.; (5) the remaining intervening space between the bone and cord is filled with spinal fluid; (6) every vertebral nerve is so placed as to act as a most efficient stay, thus preventing any swaying or other motion. The relative points for consideration between the spinal cord and brain are: (1) the difference in the weight of these organs; (2) the contact of the membranes of the brain with the skull, etc." I may add in passing that Watson found the average weight of the dogs he used for experiment to be 20.17 pounds; the average weight of their brains was 2.32 ounces, and of their cords, 182.1 grains. In man the average weight of the cord is between twenty-five and thirty grammes; the brain weight is relatively much greater than in the dog, about 0.02 of the body weight instead of 0.007.

In addition to these arguments Walton[3] has shown that if the spinous processes of the vertebræ be struck the tendency is for the force of the blow to be transmitted through the arches of the vertebræ to the bodies, instead of being carried in any way to the cord itself.

These arguments, of course, have their value, but *a priori* arguments are not scientific proof, and they demand further evidence before they can be accepted.

In this connection it may be said that a somewhat similar series of arguments might be brought forward to prove that it was impossible to have a traumatic lesion of the lung without injury to the chest wall. The lung is a spongy, elastic body, easily compressible, and moving freely within a strong, elastic cage. It is difficult to conceive how any external force could injure it, unless the force were so great as to crush the chest wall. Nevertheless, a man came under my observation a year or two ago who fell with a mass of snow from a roof, striking the ground about thirty feet below. At the autopsy Dr. Councilman found the thorax intact, but there was an extensive rupture of one lung.

Watson performed certain experiments to show that the spinal cord is but little exposed to injury. These experiments were performed upon dogs, and consisted

[2] B. A. Watson: An Experimental Study of Lesions arising from Severe Concussions, Philadelphia, 1890.

[3] G. L. Walton: Contribution to the Study of the Traumatic Neuro-Psychoses, Journal of Nervous and Mental Disease, July, 1890.

Address.

THE LEGISLATIVE CONTROL OF MEDICAL PRACTICE.[1]

BY REGINALD H. FITZ, M.D., BOSTON.

(Concluded from No. 1, p. 5.)

THE law would be simpler, fairer and easier of execution, if, as in twelve States, an examination were made the sole test of the applicant's intellectual and educational qualifications. Such a uniform test relieves the law from the charge of class-legislation, and permits the standard to be raised or lowered in accordance with the educational development or the social needs of the State concerned. The examination should be elementary and practical, both oral and written, with demonstrations when feasible, and should be designed to elicit rather the minimum than the maximum of requirement. Only licensed physicians should serve the State, and a higher order of fitness should be demanded from them than from those who serve the individual only. The latter may be satisfied with an assurance of therapeutic knowledge, the former may believe that this exists provided the other qualifications are present. The State should, therefore, require a certain knowledge of anatomy, physiology, chemistry, pathology, surgery, obstetrics and the diagnosis and treatment of disease before granting the license. The highest attainment of medical knowledge will always be demanded by the universities which are the chariest of the reputation of their degrees. A lower standard suffices for the State medical society desirous of including within its ranks all the intelligent, educated and moral physicians of the State. The last must recognize the existence of two classes of practitioners, the licensed and the unlicensed. The former, alone, should be authorized to perform all public services, the latter may be permitted to treat the sick on condition that it shows, in advance, a knowledge of contagious diseases and the means of preventing their spread.

The examinations should be of a semi-public character, best accomplished by the preservation for a limited time of the questions and their answers. Such documents will give the best evidence of the fairness or unfairness of the examiners, and will show the scope. It would be well for some of them to be published from time to time, that the public may be informed of the effect of the law. This is done in Virginia and Minnesota, and a few of the questions and answers are here given. The following are from Virginia : [84]

"Give general and descriptive anatomy of the stomach. It is the organ where the food is digested; it is a very extensive organ."

"Describe or define a cell. It is a place of confinement."

"The normal temperature of the human body is from 112° to 140°, and the average respirations are 70 per minute."

"The technical name of rhubarb is columbo."

"The dose of antipyrin for a child five years old is fifteen grains every three hours, and that of morphia hypodermically for a child of the same age would be one-fourth of a grain, and if that doesn't give relief I would give one-half grain."

"Phymosis is the result of old age. To the question of the diagnosis of the dislocation of the head of the femur on the dorsum of the ilium, it is replied, "Don't know much about the diagnosis, but the treatment is amputation."

"The symptoms of œdema of the glottis are that the patient feels husky and has a sore throat. I would amputate it if necessary. I would do the operation within three or four months if it was a bad case."

"Extra-uterine pregnancy may be a fungoid growth or tumor, fibroid in its character, or any extra growth in the utrous would be call extra-uterine pregnancy."

"A breech presentation may be known by the sense of touch, the buttox being different in formation from the cranium. The anus is different from the mouth, absence of tongue and nose. Get your finger in the inguinal region soon as possible and assist your patient by ferm but gental tention."

"The best way to facilitate the expulsion of the placenta is to let the woman get up and walk about the room, allowing five minutes to elapse after delivery before requiring her to get up and walk."

In Minnesota the following answers were given : [85]

"The scrofulous diathesis is known by a peculiar greasy exudation from the axilla or inside of the thighs, possibly behind the ears; has a sour, fetid, strong smelling odor."

"Symptoms of cardiac dilatation — a dull pain at pit of stomach, and a feeling of water in the bowels, emaciation, anema, loss of flesh. Treatment, put patient on a milk diet, and give rectal onema of pepsonical food, and a nerve tonic to tone up the system."

"Treatment of neuralgia — if the part is swollen up such as the cheak may apply a worm poultice, paint the part over with iodine."

"Locomotor ataxia — hear all the lesions or pathology changes is situated in the forth ventricle of the brain, and a slight pathological chage in the peduncles of the seberlium (I am rattled if that ain't right)."

. . . . . .

"Placenta prævia (this is a retaining of the placenta structures after the delivery of child, and a part of the placenta), all is to be done in this case is to introduce the hand or a instrument and remove any of the membranes that is left or curet the utris."

"Symptoms of typhoid fever — the patient has a tongue heavily fured putrid offensive; head feels scattered about."

The candidate who has passed a successful examination receives a certificate to this effect — the license — which is recorded in the office of the board of examiners and should be registered elsewhere, that the names of the legally qualified physicians may be readily found. The place of registration varies in the different States. In many the County Clerk is the registering officer, in others the Clerk of the Superior Court, or of the District Court has charge of the register. In South Dakota it is kept in the Registry of Deeds, while in Alabama the Judge of Probate is the officer of registration. The importance of such registration is illustrated by the experience of North Carolina in 1891, in which year many physicians remained unregistered, of such influence and standing in the community as to defy the law with impunity.

The examining board should have the power of refusing or revoking licenses for cause, and should be able to subpœna witnesses, hear testimony and decide. Any appeal from the decision should be made to the Governor. The cause for such revoke or refusal of the license should be criminal, unprofessional, dishonorable or disgraceful conduct. Instances of unprofessional conduct are to be found in untruthful or improbable advertisements of promised treatment, deceiving the public; advertising methods or medicines regulating menstruation or re-establishing suppressed menses.

[1] The Annual Discourse before the Massachusetts Medical Society delivered June 1?, 1894.

[84] Coll. and Clin. Record, 1890, xi, 8. Journal Am. Med. Association, 1891, xvi, 108

[85] North-Western Lancet, 1891, xi, 139.

That the law may be enforced it is necessary that there should be a penalty for evading its provisions, and officers to bring charges against the law-breakers. The penalty varies in the United States from $10.00 to $500.00 fine, or imprisonment from ten days to a year, or it may be both fine and imprisonment. A severer penalty should be enforced for repeated offences. The severest penalties are inflicted for filing or attempting to file the certificate of another or for false or forged evidence; the crime is then regarded as felony, punishable as forgery.

It has been found difficult to enforce the laws in many States, since some examining boards object to being both accusers and judges. Physicians are usually unwilling, and prosecuting officers refuse to bring charges, unless it is made their duty. In certain States any person may sue and recover for evasion of the law. In Wyoming it is the duty of the police, sheriff or constable. It should be made the duty of the examining board to bring charges before the proper officials. This responsibility will be so grave as not to be lightly undertaken, and should only be assumed in such instances as the public will approve.

All recent legislation has been found impossible without first harmonizing the most powerful antagonists. The State makes no distinction between the various incorporated medical societies, and will not legislate at the suggestion of the one if the others oppose. Regulars, homeopathists and eclectics, and all practitioners possessing a diploma or license to practise, must therefore be united in their approval of the provisions of the bill. The law must not exclude from practice those who have been employed for a period of years, and who during this time have had equal rights with members of the incorporated societies. Its prohibitory provisions should not be enforced until a sufficient lapse of time to allow registration to be accomplished, and examinations to be held throughout the State. Permission to register should thus be allowed to all practitioners with or without diplomas or certificates at the time of the enactment of the bill, or to those only who have been in continuous practice for one or more years. The limit most frequently assigned is ten or more years. After the enactment of the bill all practitioners of medicine should register within a limit of time, from six months to a year, or be subject to the penalty.

The law should define what is meant by the practice of medicine, this having been found necessary both in avoiding ignorant opposition to its acceptance, and in securing the enforcement of its provisions. The following definition appears in the law of Georgia:

"To practise medicine means to suggest, recommend, prescribe, or direct, for the use of any person, any drug, medicine, appliance, apparatus, or other agency, whether material or not material, for the cure, relief, or palliation of any ailment or disease of mind or body, or for the cure or relief of any wound, fracture, or other bodily injury, or any deformity, after having received or with the intent of receiving therefor, either directly or indirectly, any bonus, gift, or compensation."

In Minnesota, "appending 'M.D.,' or 'M.B.,' to name, or prescribing, directing or recommending for use [of any person] any drug or medicine or other agency for the treatment, care or relief of any wound, fracture or bodily injury, infirmity, or disease, is regarded as practising medicine."

The following persons should be exempt from the action of the law: medical officers of the army and navy of the United States, or of its Marine-Hospital service; legally qualified physicians or surgeons called from other States to attend patients in the State concerned, or to consult with the physicians caring for them; members of the resident staff of any legally incorporated hospital or asylum; medical students under the direct supervision of their medical teachers; midwives attending cases of confinement; nurses in their legal occupation; dentists, exclusively practising dentistry; manufacturers or dealers in artificial eyes, limbs, orthopedic instruments, or trusses or like apparatus for the use of the sick or infirm; pharmacists or apothecaries dispensing or selling medicines or medical appliances; sellers of mineral waters, or of patent or proprietary medicines in the regular course of trade; gratuitous advisers in cases of emergency; domestic prescribers; persons giving advice in regions where there is no licensed physician within ten miles.

The Connecticut law of 1893 also exempts chiropodists or clairvoyants not using in practice drugs, medicines or poisons, persons practising massage or Swedish movements, sun-cure, mind-cure, magnetic healing, or Christian science, and persons not using or prescribing in their treatment of mankind, drugs, poisons, medicine, chemicals or nostrums.

To what extent does the proposed Massachusetts law comply with these essentials?

The board of registration is composed of seven members, of whom not more than three shall be at any one time members of any one chartered State Medical Society, and it is appointed by the Governor and Council. This action is fair to all, and the appointment lies in the hands of the executive of the people.

All practitioners of medicine graduated from legally chartered medical colleges or universities having power to confer degrees in medicine, and every practitioner of medicine in this State continuously for three years previous to the passage of the act, shall be entitled to registration upon the payment of a fee of one dollar, and must be registered by January 1, 1895. This section is fair to the majority of the irregular practitioners, whose legal status up to the enactment of the bill is equal to that of the medical graduates of incorporated schools and universities. It gives them no privileges not already possessed. Any person not entitled to registration as aforesaid may pass an elementary and practical examination wholly or in part in writing, embracing the subjects of surgery, physiology, pathology, obstetrics and the practice of medicine, and sufficiently strict to test his or her qualifications as a practitioner of medicine. Such an examination would permit any competent and trustworthy practitioner, who had been in practice for less than three years, to be registered even if possessed of no degree. A person who can show that he knows how to practise surgery, obstetrics and medicine should not be debarred by lacking a degree. He may not be the wisest, most skilful and moral physician, but he is likely to do no harm to the people at large.

Although certificates may be revoked for criminal cause, the original bill permitted them to be revoked for any cause satisfactory to every member of the board. The bill has been distinctly weakened by this amendment, since the public may be injured by unprofessional, disgraceful and dishonorable conduct on the part of the practitioner, as well as by that of a criminal nature.

The provision to make it the duty of the board to investigate all complaints of disregard, non-compliance or violation of the provisions of this act, and to bring all such cases to the notice of the proper prosecuting officers, is eminently judicious. It would have been more efficient had the board been allowed to subpœna witnesses.

The committee's bill required that after 1894 all applicants for registration should be examined. This section has been weakened by exempting the graduates of legally chartered medical colleges and universities of the Commonwealth. The standard may be much higher for their degree, but the State makes them privileged by practically granting them the power of license. There should be no confounding of the license and the degree, and the chartered medical colleges or universities should be the first to request the elimination of this clause.

Section 10 is defective in that it allows the registered physician or surgeon to append to the name the letters "M.D.," whether the degree has been received or not, and punishes the unregistered M.D., who has earned the title, by a fine if he does not register. The physician or surgeon is defined as one who advertises or holds himself out as such by appending the letters M.D. or using the title of doctor, meaning thereby doctor of medicine. But the law gives no definition of the practitioner of medicine for whose registration it is intended to provide.

The chief weakness of the law is the amendment to the committee's bill, which permits any one to practise medicine without an examination, provided such person does not make use of the title doctor or the letters M.D., meaning thereby doctor of medicine.

These are the practitioners who should be controlled — not because they harm the individual, for if he desires them that is his privilege, but because the ignorance of such persons is a constant source of danger to the entire community. If they are to be allowed to practise, and they are welcomed by some, the protection of all demands that they should show, by examination, a familiarity with the means of recognizing the contagious diseases, and of so treating them that they may not promote the spread of small-pox and diphtheria, of measles, scarlet fever and the like.

The law is a safeguard to the community to a certain extent. It represents essentially a return to the conditions which prevailed when the State assigned the duty of licensing physicians to the Massachusetts Medical Society. It enables a discrimination to be made between registered and unregistered practitioners, those of some education and those of no education; a distinction which will increase in value to the public in the course of time. If it has no other merit it provides for the appointment of State officials to execute the law, and thus offers a constant, impartial and efficient means of recommending to the legislature any necessary amendments in the future. It is of no value to the Massachusetts Medical Society, which has no need of it. Her standard will always be the loftier, however high that of the State may be raised. To be a member of the Massachusetts Medical Society will continue to represent association on terms of equality with the most intelligent, the best educated and the most honorable physicians of the State.

OF 545 cases of morphinomania in France recently studied by Lacassagne, 289 occurred in physicians.

Original Articles.

THREE YEARS' EXPERIENCE WITH SANITARIUM TREATMENT OF PULMONARY DISEASES NEAR BOSTON.[1]

BY VINCENT Y. BOWDITCH, M.D.,

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IN presenting to you the results of treatment of pulmonary diseases in the last three years at the Sharon Sanitarium in Sharon, Mass, near Boston, I do not claim anything strikingly original; but the results obtained thus far are, I feel, of sufficient interest and importance for me to ask your attention for a short time, with the hope of convincing others that similar methods adapted under like conditions, may bring forth equally good, even better, results than these.

Some of you may remember that about four years ago, at a meeting of this Society, I mentioned the fact that, through the generosity of wealthy people interested in the scheme, Dr. R. W. Lovett and I had the intention of erecting a small sanitarium for the treatment of people of very limited means (the most difficult class to reach) who were *just beginning* to show signs of tubercular disease of the lungs, and who from lack of means are unable to seek distant health resorts. In that paper I briefly mentioned the various sanitaria now well known to the whole profession, namely, Gœrbersdorf in Silesia, Falkenstein near Frankfort-on-the-Main, Dr. von Ruck's in Asheville, N. C., Dr. Trudeau's at Saranac in the Adirondacks, the Bellevue and Glockner Sanataria at Colorado Springs, and others in California.

All of these institutions are more or less remote from our great cities, and are situated in climates which in themselves are considered favorable for consumptives; the exception possibly being Falkenstein in Germany, which is not many miles from Frankfort-on-the-Main, yet this institution has the advantage of being at a considerable altitude (about 1,500 feet above sea-level), and is intended for the wealthier classes.

The Sharon Sanitarium has these distinctive features, and so far as I know is the only one in this country which combines the following conditions, namely, that it is within easy access of Boston, situated in our New England climate, which is notoriously unfavorable for consumptives, at an altitude of about 400 feet only, and is intended for the use of people of very limited means, like teachers, shop-girls, etc., not for the wealthier classes, and is supported chiefly by public subscriptions.

Our friend and late member of this Association, Dr. Paul Kretschmar, four or five years ago in two or three papers, strongly urged the establishment of these institutions in the vicinity of our great cities in properly selected healthy regions; and had not his labors been cut short by death, I do not doubt that before this some establishment similar to that now in Sharon would have been founded near Brooklyn and New York.[2]

It goes almost without saying, and yet it is a point I especially wish to emphasize, that I have never hoped to obtain such results as are shown by the removal of consumptive patients to more healthful climates than

[1] Read at the meeting of American Climatological Association at Washington, D. C., May 30, 1894.

[2] Since beginning to write this paper I have been gratified to hear that a similar project has been started in New York under the guidance of our *confrères*, Drs. A. L. Loomis and Charles E. Quimby.