

testing and because of the increasing necessity for special machinery and men of scientific training in work of this kind.

I believe that it is the desire of every reputable manufacturer and I know it is of the Abbott Alkaloidal Company, to get into closer touch with the retail pharmacist. Accordingly I take great pleasure in inviting the members of the Chicago Branch of the A. Ph. A. to come and see how we extract alkaloids and other proximate drug principles, and how we make our own active principle granules—how we do our work.

PRINCIPLES AND OBJECTS OF PHARMACY LEGISLATION.*

H. C. CHRISTENSEN, MEMBER ILLINOIS BOARD OF PHARMACY.

In general discussions of the question of legislation, the popular idea prevails that all one has to do to bring about desired results, is to draft a bill, get some friendly member of the legislature to introduce it and then sit down and wait for it to be enacted into a law and receive the approval of the Governor of the State. But if one pursues this course, in ninety-nine times out of one hundred the desired result will not be accomplished.

There are many constitutional and legal requirements and rules of the General Assembly that must be complied with in the preparation and introduction of a bill, and its passage through the various stages of legislation. Many meritorious measures fail of passage for the reason that at the last moment some fatal error is found in the title or the body of the bill, which it is then too late to correct. Others pass both branches of the General Assembly, are approved by the Governor and are then declared unconstitutional by the Supreme Court for the reason that the constitutional requirements have not been complied with.

But it must not be presumed, from what I have said, that every bill which is introduced in the General Assembly reaches the order of passage. A very small percentage of the measures introduced ever reach this order. The rules of the General Assembly provide that every bill must be referred to a proper committee. Scores upon scores of bills have no particular merit in them and are not taken up for committee consideration until the closing hours of the General Assembly, when they are reported back to their respective houses without recommendation. Others receive careful committee consideration and are reported back either for or against passage. If the recommendation be favorable, then there are many other stages through which the bills must pass before a vote can finally be taken upon them. Many bills that have been acted upon favorably in committee do not get beyond that state, for the reason that in the great multiplicity of measures upon every conceivable subject there is not sufficient public interest or sentiment to push them along. I mean no reflection upon the members of the General Assembly when I say that many good bills are not enacted into laws. The members can hardly be expected to study care-

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fully every measure that finds its way into the legislative hopper. If there was a limitation upon the number of bills that could be introduced at a session, then it might be possible to give all of them careful consideration. But without such limitation many are bound to be neglected.

General, wide-spread interest and public sentiment are the greatest aids in securing good laws. But even with this assistance it takes a long time to bring about needed legislation. It took years and years to get upon the statute books of Illinois a General Primary law that would stand the test of the Supreme Court. The present Civil Service law was enacted only after many years of unceasing effort upon the part of its advocates. It was largely through the influence of the Illinois Pharmaceutical Association and the interest aroused by it that the first Pharmacy Law of the State was passed. Many other instances might be cited.

The first Illinois pharmacy law was enacted in 1881. It has been amended from time to time to meet changed conditions until we now have one of the best—if not the best—pharmacy law in the Union. You are familiar with it and I will not go into details concerning its provisions. But, good as it is, it should be still further amended in many particulars.

The Board of Pharmacy, of which I have the honor to be a member, has considered this matter carefully, and I do not think I can better present the question to you than to quote from a report made by the Board to the Governor of this State last month, which is as follows:

“In order to elevate the standard of requirements of applicants for examination, to enable the board to more effectively administer the cocaine, eucaïne, adulteration and substitution provisions of the law, to provide facilities for conducting examinations, in compounding prescriptions and to keep pace with ever-changing conditions, we have the honor to make the following recommendations:

‘The law should provide that every applicant for examination as registered pharmacist must be a graduate from a school or college of pharmacy that is recognized by the Board.’

“Any law which should be enacted along this line should protect the young men who have become registered as apprentices and assistant pharmacists and are now preparing themselves for examination as registered pharmacist under the present law, which does not require graduation from a school or college of pharmacy.

“At its last annual meeting the Illinois Pharmaceutical Association went on record as favoring the above graduation requirement and instructed its legislative committee to have a bill for such a law introduced at the coming session of the General Assembly. This action was taken following a referendum vote by the registered pharmacists of Illinois, the result of which was in the ratio approximately four to one in favor of such a legal requirement.

‘The law in regard to the sale of cocaine and eucaïne and their compounds and derivatives cannot be made too drastic. The present minimum penalty for their illegal sale should be made larger.’

“Fines of from \$25.00 to \$200.00 which have been imposed upon notorious sellers of these drugs will not stamp out the traffic in them.

‘A penalty should be provided for a person not a registered pharmacist, licensed physician, licensed dentist or licensed veterinarian having in his possession at any time more of these drugs than can be obtained by means of a prescription.’

“There is no law against unauthorized persons having in their possession cocaine and eucaïne undoubtedly held for sale. Neither is there any provision in

the United States statutes which in any way regulate the interstate traffic in these drugs.

"Investigation shows that during the year 1911 a wholesale druggist in Chicago sold to a retail druggist just across the line in Indiana 150 ounces of cocaine, a large portion of which found its way back into this state to supply the needs of illicit sellers. In a raid upon the home of one of the largest illicit dealers of cocaine in Chicago there were found over thirty ounces.

'A penalty should be provided for a registered pharmacist, licensed physician, licensed dentist or licensed veterinarian having in his possession at any time more than an extremely limited amount of these drugs. It should also provide the maximum amount that may be sold or prescribed by authorized persons in a given time.'

"In an arrest in Chicago a physician admitted the sale of over 30 ounces of cocaine in one month. The requirements for ordinary prescription purposes seldom run in excess of one ounce in six months. When arrested this same physician was in the act of giving two ounces of cocaine to a supposedly woman patient. He claimed he was 'treating the woman for the habit' by diminishing the dose.'

'A limitation should be placed upon the amount of these drugs that may be sold by wholesalers to a single purchaser within a given time.'

"The records of cocaine sales which the law requires wholesale druggists to keep show excessive sales of cocaine to retailers in the city of Chicago against whom no direct evidence of improper sales could be obtained, but the amount found in stock was largely in excess of the ordinary prescription requirements.

'An appropriation of not less than \$7,500 annually should be made for investigating the illegal sale of cocaine and euaine and other habit-forming drugs.'

The above amount is none too much for this purpose and could wisely and economically be expended. Cocaine is regarded by the medical profession as the most harmful of all the habit-producing drugs. It destroys the body, mind and soul and makes degenerates, thieves and paupers of its victims. The profits in it are immense—in some cases 500%—and unless its sale is curbed by stringent regulations there will always be found unscrupulous persons who are willing to 'take a chance.'

'An appropriation should be made for a laboratory where Pharmacopoeial and National Formulary preparations may be analyzed.'

"The present law authorizes our Board to make such analyses, but it has no equipment for this purpose and no funds. The Board should be provided with ample means so that it may protect innocent buyers from unscrupulous dealers. We have every reason to believe that countless preparations are adulterated in order that the purchaser may receive a larger amount for his money than can be procured from a near-by competitor.

"Numerous instances might be cited, but we will cite but two very common preparations, namely, tincture of iodine and solution of magnesium citrate. The former is used externally and the latter internally. Recent investigation as to the purity of these two preparations that are being sold in drug stores in Chicago shows an immense amount of adulteration. When of standard strength and purity tincture of iodine is of great value, but when adulterated its effect may be nil. When properly prepared, solution of magnesium citrate is a valuable laxative, but when adulterated and made of common washing soda, as was found to be true in some instances, its effect is deleterious to the health of those who use it.

'An appropriation of \$1,500 should be made for two new prescription cases, one in our office in Chicago and one in the Springfield office.'

"The prescription counters now in use by the Board are crude affairs and are not a credit to the State of Illinois. As an example to applicants for examination

and who in time will be the proprietors of stores, our examination equipment should be the very best. Prescription counters should be equipped with good plumbing and electric lighting, and so constructed that applicants can perform all the work necessary in compounding prescriptions without being molested in any way in this important branch of our examinations.

'An appropriation of \$4,000 per annum should be made for expenses of the members of the Board and its officers.'

"This amount would enable us to have an agent in the field at all times to see that the provisions of the Pharmacy Law are complied with."

In our report to the Governor, which I have just read, we did not go into minute details as to the reasons for our prerequisite recommendations, and I am going to take this opportunity to state our views more fully, and also to discuss what I regard as other needed amendments to the present law.

Prerequisite Legislation: Perhaps no legislation affecting pharmacy is entitled to more consideration than the proposed law requiring graduation from a recognized college or school of pharmacy as a prerequisite for examination as a registered pharmacist. This proposed law has caused a great deal of discussion among pharmacists and others, and in some instances has been bitterly criticised.

Some of this criticism comes from those who are, I fear, not wholly free from partisanship and personal interest. It seems to me that this subject may be fittingly considered under three sub-divisions, namely:

First, its relation to the public at large.

Second, its relation to the proprietors of drug stores and registered pharmacist clerks.

Third, its relation to unregistered clerks, or those who may eventually become registered.

How will this proposed law, if enacted, affect the public? And let me say right here that no matter how this law might affect pharmacists, boards of pharmacy, clerks, proprietors or others, the great rank and file of the people who elect representatives to enact their laws must receive first consideration. Laws are enacted primarily, or should be to protect the interests of the people as a whole, and not the few who may be interested in the enforcement of them, or those whose business or employment may be affected by them. This is especially true of the laws relating in any way to the public health. How, then, would this law affect the public? Need I argue that it will result in superior service? That such a law would redound to the benefit of the public, I think none will deny. Most men, the great majority of men, in fact, will give the best that is in them when they see and recognize that which is best. But how, I ask you, is a druggist going to give his customers Tincture of Iodine up to the standard, Syrup of Iron Iodide free from Iodine, Solution of Hydrogen Dioxide containing the required 3 percent of absolute Hydrogen Dioxide, and Ammonia Water containing the required 10 percent of NH_3 , if he has not the skill or inclination to determine the strength, purity and quality of his preparations? I do not want to be understood as arguing that a college graduate is always the superior of the non-graduate, but I do maintain that out of a given number of college-

trained pharmacists the public will receive better service than out of a like number of non-graduates.

Opponents of graduation as a prerequisite may argue that 90 percent of the drug business is purely commercial and 10 percent professional, and that, therefore, college training is 90 percent unnecessary. But I reply that in times of sickness and distress, when the life of loved ones may be hanging in the balance, the 10 percent professional outweighs the 90 percent commercial.

Now, how would this proposed law affect proprietors and those who are already registered? Some proprietors are opposed to this law. Their principal objection is that clerks are now hard to get and that if a prerequisite law is enacted they will be still harder to find. As you know, it is intended to apply only to registered pharmacists. The result would be an increase in the number of assistant pharmacists, and, in my opinion, an improvement in the class of those who would be registered as registered pharmacists under the provisions of the act.

Proprietors are not suffering from a scarcity of registered pharmacist clerks, but rather from the competition of a certain class of registered men, who are not college graduates, and from unregistered men who have entered into business on their own account and are employing registered help.

Some of these men have embarked in business without sufficient training or capital to enable them to be successful along legitimate lines.

It is probably true that the enactment of a prerequisite law may, to a limited extent, increase the wages of good registered pharmacist clerks. But if the wages paid are commensurate with the duties of a good registered pharmacist clerk, this particular class will not embark in business on their own account until such time as they have received the necessary training and acquired the necessary capital to justify them in entering upon business careers, as proprietors, on a basis that would not be detrimental to those already in business. In other words, they would be honorable competitors.

Furthermore, the fact that at present a clerk can become registered without even attending college induces many young men to plunge into proprietorship of drug stores in the hope and expectation that by employing a registered man for a time they can prepare for examination, and at the same time conduct a business and make a living. To my mind this class of proprietors is the most dangerous competitor. Without the experience or training necessary to succeed, they are soon compelled to dismiss their registered help, evade the law as best they can and make a living by whatever means appeals most readily to them. This is the kind of competition honest, well-meaning and capable proprietors of drug stores are compelled to meet. Graduation as a prerequisite for registration would eliminate this latter class of competition, because few would have the temerity to engage in business on their own account with a two-year college course ahead of them, and which would necessitate their absence from the business a great portion of the time.

When we come to the question of the clerks who still have an examination to pass, we hear a great deal about the hardships it will impose upon young men who have not sufficient means to justify them in entering a school or college of pharmacy, and who therefore will be compelled to "work their way through

school." A thing is a hardship only when the result obtained does not justify the effort. If a young man succeeds in working his way through college and gets his diploma, it is not regarded by him as a hardship. Rather is he proud of what he has been able to accomplish by his own individual efforts.

In this city hundreds of young men work their way through medical, dental, law, literary and engineering schools under a heavy expenditure of time and money, much more than is required in a school of pharmacy, and yet we never hear of them complaining or wanting to dispense with the college course for these professions. With the "every-other-day" plan of instruction in vogue in the colleges of pharmacy scores of young men "work their way through" every year with much less effort and sacrifice than do the students in other professions.

It is argued that examinations by the Board of Pharmacy should determine a man's fitness for registration. As a member of the Board of Pharmacy for a number of years, assisting in the examination of hundreds of candidates, I assert that it is a hard undertaking to devise or give an examination that will always admit the fit and reject the unfit. A bright candidate, properly coached, can pass an examination of extreme difficulty, while the same candidate, if he had to put what he tells into actual practice, would in many cases fail. It is a positive fact, as has been demonstrated in examination time and again, that a candidate may give a detailed description of the method for the assay of Opium, for instance, and yet that same man would have great difficulty in assaying a sample of Opium if he were put into a laboratory for that purpose.

There are certain things, a certain training, obtained only by a systematic course in pharmacy, that no examination can measure, and yet, which the candidate must have in order to succeed in the true sense of the word.

College training in pharmacy is being required in the more advanced states. Where it has been tried there is no disposition to go back to the old order of things. It is in harmony with the progress of the times and follows naturally similar requirements in medicine, dentistry and other learned professions. Is there any reason why Illinois, which leads in so many good things, should lag in this important educational movement?

As to the other recommendations in our report to the Governor, I think the reasons given therefor are sufficient to enable you to get a clear understanding of what the Board of Pharmacy regards as being necessary, and to properly bring these matters before you for discussion. I will not therefore dwell upon them at any further length.

A Pure Drugs Act: If you followed the above report of the Board to the Governor closely you observed that with the exception of a request for an appropriation sufficiently large to enable the Board to properly equip a laboratory for analyses, no recommendation is made for further amending the law to prevent the manufacture or sale of adulterated or misbranded drugs. In other words, no recommendation is made for what is known as a "pure drugs" act, of which the Federal act upon this subject should be the basis. Personally, I am firmly of the opinion that such a law should be enacted.

Section 14 of the present law covers the manufacture and sale of medicines and preparations recognized in the United States Pharmacopœia and National Formulary as official. No deviation from this standard is permitted. The

law as applied to this class of preparations is in accordance with the so-called "single" standard. This, I believe, is as it should be.

But the section referred to is silent upon the subject of labeling preparations intended to be used for the cure, mitigation or prevention of disease, and generally known as patents and proprietaries, in order that they may show whether or not they fall below the professed standard of strength or purity under which they are sold.

Neither is there anything in the section referred to upon the subject of the package or container bearing a statement upon the label of the quantity or proportion of Morphine, Opium, Heroin, Chloroform, Acetanilide, etc. I realize that there are many well-meaning druggists in the State who are opposed to any further statutory regulation in these respects. The United States Government requires certain labels upon all medicines and preparations which enter into Interstate traffic. A number of States require them on domestic preparations. Outside of the pharmaceutical profession there is a strong sentiment and general demand for a more stringent law in regard to these matters, and I am satisfied that within the very near future such a law will be passed by the General Assembly. If the druggists of the State oppose it, then its administration will be committed to the State Food Commission.

In not a few states, pure drug laws were enacted under an aroused public sentiment, which were distinctly detrimental both in their nature, and manner of enforcement to the druggists of these States, and without being of any special advantage to the public. Had the druggists of those states taken an active interest in the matter no doubt these laws would have conserved every interest on the subject, and at the same time proved less distressing to the pharmacists. In order that this state may not have a similar experience, it is high time the druggists took upon themselves the task of doing two things,

First, securing an appropriation to enable the Board of Pharmacy to properly enforce the existing law pertaining to pharmacy, and

Second, securing the enactment of a law or an amendment to the present law along the lines of the Federal act that will conserve the public welfare and not work an undue hardship upon the pharmacists.

It is for the pharmacists of Illinois to say whether they will champion a pure drugs act which will be enforced by the State Board of Pharmacy, or whether they will sit idly by and permit such legislation to be fostered and enforced by those who may not have the best interests of the pharmacists at heart.

Sanitary Inspection of Drug Stores: Another needed amendment to the pharmacy law is one establishing authority to inspect and regulate the sanitary conditions of drug stores. That there are *some* stores that might be improved by such a regulation, I think you will admit. Not *your* stores, of course, but *some* stores. Over on the West Side a druggist has opened what he calls a "Sanitary Drug Store." Why a Sanitary Drug Store? Evidently this druggist believed that a Sanitary Drug Store would make a "hit," the same as Sanitary Barber Shops, Antiseptic Laundries, and Sterilized Turkish Baths. Are there other drug stores in the city that are not sanitary? It seems to me that the very naming of this Drug Store has a rather pertinent significance. We have, especially in the larger cities of the state, laws, regulations, or ordinances

providing for the inspection of grocery stores, meat markets, restaurants, dairy depots, etc., in order that the public health may be protected.

Does it not appeal to you that any business as closely related to the public health as a drug store should also be subjected to sanitary regulation?

There is also another reason, and to my mind a more potent reason why drug stores should be so inspected. The law of this state provides that drug clerks must have had three or four years' experience in retail drug stores compounding prescriptions under direction of a registered pharmacist prior to registration, thereby establishing and recognizing the necessity of actual experience as a training for the profession. In what kind of an environment do these clerks get their training? If you had stood, as I have stood for the past six years and watched clerks compounding prescriptions, and if you had seen the carelessness, slovenliness of the work of some of them, had seen the condition in which they turned out the finished product, the filthiness in which they left mortars, graduates, balances, spatulas, and counter, you would wonder where some of these men were trained, or rather you would wonder about their preceptors. And mind you these same men came with affidavits of from three to ten years' experience from druggists of this state who would resent most emphatically any imputation that their stores were not the acme of cleanliness and their methods of dispensing beyond reproach. Furthermore, unsanitary surroundings tend to make clerks, especially in the impressionable stage of their apprenticeship, careless in their weighing, measuring and other essentials of successful dispensing. It cannot be expected clerks trained in slipshod drug stores will become neat and careful pharmacists.

In view of the fact that the state recognizes and accepts drug store experience as an essential qualification for registration, should not the state supervise the conditions under which this training is received?

Inspection of Weights and Measures: Another amendment to the pharmacy law should establish inspection of weights and measures used in the drug stores of this state. The state law permits cities to pass ordinances establishing a city sealer's office for the inspection of the weights on which you buy your sugar, meat, grain or coal and the measures by which you purchase your milk, malt or coal oil. In most large cities, ordinances to this effect have been passed, and are being enforced, but no provision is made for the inspection of the weights and measures used in compounding medicines upon which human life may depend. This is clearly a serious omission. The passage of such a law would necessarily provide for *standard* weights and measures that would be accessible to the druggist. As it is now, the only guaranty that the druggist has as to the accuracy of his weights and measures lies in the integrity of the person who supplied the same to him. Too frequently, the pharmacist sacrifices accuracy to price with results more serious than he may ever know.

The Federal Government, recognizing the importance of accuracy in weights and measures, has established a "Bureau of Standards" in which all the weights and measures used in government work may be, and many *must* be, standardized. In the sugar work of the customs service, for instance, no apparatus may be used unless it bears the seal of the Bureau of Standards, and the weights they furnish are gold plated in order that there may be no change after same leave

the bureau. If you think weights and measures generally supplied are accurate, go into any dealer in chemical apparatus and price the ordinary burettes and graduates and those that are standardized and guaranteed correct. You will be astonished at the difference in price.

The state makes provision for punishing a pharmacist if his preparations are not up to the standard and yet makes no provision for aiding him in establishing the reliability of his weights and measures on which the accuracy of his preparations *absolutely* depend.

In favor of this amendment to the law, it may be said it would be a preventive rather than a punitive measure, a help to the druggist not a handicap, a measure in harmony with the spirit of all legislation, which aims to prevent rather than punish infractions of the law. Ninety percent of the druggists of the state would avail themselves of an opportunity to establish the accuracy of their weights and measures if there was a set of standards in their city or county. The other ten percent should be compelled to.

In the suggested amendments of the law for the inspection of the sanitary conditions of stores as well as for the inspection of weights and measures, I lay great stress upon the importance of having these measures enforced by the Board of Pharmacy, rather than by some other branch of the state government that might be either indifferent or hostile to the welfare of the pharmacist. You cannot impute any selfish motive to a member of the Board of Pharmacy for recommending that these measures be enforced by the Board, because membership on the Board of Pharmacy may change, but it is highly important to the pharmacists themselves that laws be both drafted and enforced by those who fully understand the conditions under which the pharmacist must work.

The Board of Pharmacy, elected you might say, by the pharmacists of the state, acting through the state association, conversant with the needs, desires, limitations, etc., of the pharmacists, is in a better position to enforce fairly and justly, the laws pertaining to pharmacy than any foreign executive body of the state government.

Revocation of Certificates: Authority should also be given to the Board to revoke the license and close the stores of persistent violators of the Pharmacy Law. The law requires that applicants for examination as registered pharmacist and assistant pharmacist shall be of good moral character and temperate habits, and also confers upon the Board the power to revoke the certificates of registered pharmacists and assistant pharmacists, who have become addicted to the excessive use of stimulants and narcotic drugs and whose moral character has deteriorated. No doubt there are many persons holding certificates at this time which should be revoked on these accounts. But the Board of Pharmacy has no means of telling who they are, and cannot act in the premises unless they are advised by proprietors and others. The Board realizes that it would be very embarrassing at times for proprietors to report information about clerks which would result in their certificates being cancelled, but it seems, for the general welfare of the profession, that this should be done.

Paris Green Section: That part of the law which permits the sale of "Paris Green and Lead Arsenate for insecticide purposes only" by other than registered pharmacists, should be changed. It should provide for their sale, and also for

the sale of other poisonous substances or mixtures of poisonous substances in unbroken packages, for use in the arts or as insecticides, upon condition that they bear a label with the names of such poisonous substances and the word "Poison" printed thereon in prominent type, and the names of at least two readily obtainable antidotes with directions for their administration.

In concluding, I want to refer very briefly to the work of the Board of Pharmacy during the last eight years, most of which time I have been a member of it. In that time the Board has examined 3926 applicants for registered pharmacists and 2503 candidates for assistant pharmacists, to say nothing of the hundreds upon hundreds of apprentice applicants, whose examinations have been about the same as is required for eighth grade pupils in the public schools. Some applicants for registered pharmacist and assistant pharmacist, in fact, a great many of them, have taken two, three and even four examinations, and therefore the numbers above mentioned do not necessarily mean that many different *individuals*. Of the above numbers, 1592 applicants for registered pharmacist and 1366 applicants for assistant pharmacist passed successful examinations and were granted certificates. Every applicant has been examined in four branches in written work and until the year 1912 has been required to compound four prescriptions. During the past year applicants have compounded but three prescriptions or preparations each. This means that approximately 25,716 written examination papers have been carefully gone over and rated by the Board and that 24,709 prescriptions have been compounded under its close supervision.

From the organization of the Board in 1881 until July 1, 1911, it was self-sustaining. During all that time the General Assembly did not appropriate a single penny for its maintenance. Since July 1, 1911, we have been paying all moneys received into the State Treasury. Up to October 1 of this year we have paid \$28,826.50 into the State Treasury and had spent \$19,938.76 of the \$31,560.00 appropriated to maintain the office until July 1, 1913. By July 1, 1913, we will have paid into the State Treasury approximately \$45,000.00. You will observe that the Board is paying more money into the State Treasury than it receives by way of appropriations. The Board feels that the General Assembly should at least appropriate as much as the state receives.

A QUESTIONABLE PRESCRIPTION.*

JOHN A. HANDY, PH. C., B. S.

The following prescription was recently brought to my attention by one of the members of the State Board of Pharmacy, who informed me that it was one which had been sent to his store by a local physician:

"Phenol (carbolic acid) C_6H_5OH	2 grains
Arsenic Trioxide (arsenous acid) As_2O_3	1 grain
Silver Oxide Ag_2O	6 grains
Mercurous Iodide (proto-iodide) HgI	12 grains
Extract of Hyoscyamus.....	6 grains
Extract of Liquorice (powdered).....	100 grains
Mix and make into 48 pills.	
Sig.—Take one pill before meals."	

*Read before the Northwestern Branch.