only about 35 per cent. of the drug business today is strictly professional. This part of the work must be taken care of and calls for the very highest training, a fact often overlooked.

Commercializing of the drug business, the branching out into the many side lines, even including caffeterias, seems to be here to stay. It is a condition that must be met, no matter what our idea may be about ethical pharmacy. The changed commercial conditions require, in a certain respect, educational changes.

The time is past when the successful druggist can ignore such questions as salesmanship, which has become a science, window displays, business etiquette, business correspondence, store service, business economics and advertising. Some of our colleges are already taking advantage of their opportunity by giving instruction in these subjects. It is a logical field of instruction that must not longer be neglected.

The coming year will find many state legislatures in session, and no doubt the usual number of bills of interest to pharmacists will be introduced. Attention is again called to the imperative need of organization. The medical profession has blazed the trail and we can see the results. The old adage, "In union there is strength," was never truer than in legislative matters.

The druggists of any state, if properly organized, can exert enough influence to prevent pernicious legislation, for as a whole they are a highly respected professional class, and if they fail to get a square deal it is due to the fact that they are not alive to their own interests. The only logical solution is through local, county, state and national organization of the druggists.

THE PHARMACOPOEIA AND THE LAW.

H. H. RUSBY.

The vast extent and importance of the material interests controlled by the purely legal aspects of the Pharmacopoeia are realized by but few persons who have not been brought into direct contact with the customs business of the country. Individual shipments of drugs frequently count up into the tens of thousands of dollars in value, and of these extra-large shipments there are frequently a number at one port, in a single day. The question of the admission of these drugs frequently depends upon their conformity with the official requirements. If not in such conformity, the American merchant, in accordance with special conditions in his contract, may often return the goods to the shipper without material loss, but in a great many, if not in most instances,, he must lose the greater part, or even the whole of the value of the goods. Think of 10,000 pounds of ergot, at $1.60 per pound, condemned to rejection, and suffering farther ruin while the case is pending; 20,000 pounds of buchu at upward of a dollar a pound, condemned because of an excess of stem; senna of the same value condemned because it yields 2 or 3 per cent. of ash in excess of the allowance, or a ton of saffron worth $8.00 a pound because the styles have been plucked a half an inch too long, or 3 or 4 per cent. excess of water has remained in it.

Assuming that the drugs have been admitted into the country, some intentional or accidental change in them may subsequently render them objectionable, under the Pharmacopoeia, in inter-state or intra-state commerce.

If, on the other hand, we consider the view of those interested in the public health, or in the correctness of commercial transactions, we find interests quite as extensive, and far more serious, depending upon the official standards. Not only does this apply to the welfare and safety of the sick, but equally to the standing and reputation of two great professions.

Is not, then, the subject of the legal aspects of the Pharmacopoeia one to demand and command the serious attention of a body so well circumstanced for aiding in their control, as this Association?

It may reasonably be expected, indeed it is unreasonable not to expect, that the legal features of the Pharmacopoeia will be made the most important subject of study by its makers. Yet we find that some of the U. S. P. standards are directly opposed to successful medical practice, and that many of them are based wholly on conjecture or mere legendary belief.

Assuming similar conditions to exist in any other equally important department of human activity, even though such interests were purely financial, what course of procedure should we expect on the part of those responsible? Would there not at once be made an appropriation of men and money, for the purpose of investigation and correction, commensurate with the importance of the subject and the difficulty of the task involved?

That this was not done in the case of the edition of the Pharmacopoeia at present official should call for very mild and incidental criticism.

It would be ungenerous, if not actually unjust, to criticize the present Pharmacopoeia because of its shortcomings as an authority in the interpretation of our pure drug statutes. True, it was compiled for the purpose of establishing standards for the articles recognized, but, there being at that time no Federal or very important State statute based directly upon these standards, the later were prepared with a view to their professional rather than their legal application, and the vast influence for good and evil which was to be wielded, and now is wielded by those standards, had probably occurred to the mind of none.

Now the difference between the legal and the professional application of a standard, while perfectly clear to those who have had abundant experince, is not so clear to all others. If it were, this paper would not be presented. It is because I realize that many of the members of the Committee of Revision have no clear idea of the importance of providing in the present revision work for the legal snags of administration that I have deemed it necessary to induce this body of practical men to formally recommend that the Revision Committee pay particular attention to these requirements in the forthcoming edition.

When professional people are called upon for this class of interpretations, they are supposed to seek out the intent and purpose of the language, and to apply the latter in the interest of such intent and purpose, if possible. When courts are called upon to do the same, the usual method of procedure is such as will yield the largest amount of revenue to the attorneys in the case. It is not meant that this is the court's object at the time of the particular trial, but that a system of legal administration and even of legisation, has grown up, in which this object

of increasing attorneys' fees has, perhaps unconsciously, grown to be the determining influence. In this way, questions of interpretation have come to depend on technical meanings or omissions, often to the end that the plain intent of the writers, known and admitted so to be, is set aside for the (often greatly strained) technical interpretation.

Let us, by way of illustration, consider the subject of senna. We have, first, the title, which is merely "senna." By a common-sense construction, this would be extended to include Alexandria senna and India senna, because these are mentioned in the description. By a narrow construction, these would be excluded, and I have actually known an attorney to argue for such exclusion, in a very similar case. Morever, the title "Tinnevelly senna," though a fully recognized synonym of India senna (professionally and in common sense) would be excluded, unless given in the index of the book. This would be true of all other synonyms. Furthermore, it has been frequently held that the term senna itself would be so excluded, if coupled with a qualifying word to show its condition, as broken, cut, granulated, powdered, in No. 60 powder, etc.

Let us next consider the definition:

"The dried leaflets of Cassia acutifolia Delile (Alexandria Senna), or of Cassie augustifolia Vahl (India Senna), (Fam. Leguminosae)."

Now, if a 500 lb. bale of senna was sold that contained one pound of stems, stones, seeds, other leaves, or foreign matter of any sort, its sale would be prohibited according to the legal technicality, because this definition refers only to the leaflets. This interpetation is however, in the case of senna, modified by something which follows, and which will be considered further on. Now a judge, professing to be very practical, says that such a interpretation would be absurd, because practically no senna of this description would ever be found in commerce, so that the enforcement of this absolute standard is impracticable. It being thus established, on sound reasoning, that some foreign matter *must* be allowed, reason is at once dethroned to make way for the declaration that, no permissible amount of impurity being specified in the Pharmacopoeia, any amount may be admitted! No professional man, and no acting rationally being, would so rule. But judges are not permitted to officiate rationally. A rational being is one who in seeking a desirable result or end, adapts and employs his means for securing that result. A court is a machine that has been constructed to exalt, in practice, the means (that is, the law) above the end (that is, justice); to fall down and worship at the shrine of the means and to rule that the end is of no consequence when its attainment requires the subordination of the means unto it. It is pointed out to him, that the Department, seeing this necessity, has decided to allow 5 per cent. of such impurity, but he replies that this is legislation and that the Department has no right to read into the law things which are not there. It is thus decided that any amount of adulteration can be permitted with senna, for the specific reason that the Pharmacopoeia forbids any adulteration whatever.

Next follows the description of senna, at the close of which is the statement that senna shall be free from stalks and Argel leaves. Now, our lawyer points to that part of the law which mentions the standards of the Pharmacopoeia and

claims that the only thing in the nature of a standard for senna is this note about stalks and Argel leaves, and claims that, for the reason that this has been placed there, all other impurities are exempted from the ban and that any adultererants other than stalks and Argel leaves are admissible. He strengthens this position by showing that in the foregoing edition the statement read "stalks, Argel leaves and other impurities" and that when the revisors cut off the last three words, they intended to permit all other impurities to be added. The court supports this contention, and the end and purpose of the law are annulled.

How is this case to be met? Obviously by adding to the definition, and not as a foot-note, the words "admixed with not more than 5% of other and non-injurious substances."

Another question arises in this connection, namely, what are "stalks." The lawyer refers to corn-stalks and bean-stalks to show that it means the stem of the plant. He may admit that the leaf-stalks or petioles are included, but denies that the rachis is included. The remedy then is, if any terms at all are employed to use them in their proper technical sense. This is a good answer to the claims so often made that the Pharmacopoeia should be free from technical terms. The only exact terms are technical terms, and that is just what makes them exact.

Based on that part of the law that says "when sold under a name found in the U. S. P.," a host of contentions have been advanced that when the words powdered, cut, broken, etc. are added to a U. S. P. name, the combination so resulting not occuring in the Pharmacopoeia, the article so labelled is exempt from the standard requirements. There is at the present time a hope that this language may be changed by the enactment of the corrected Richardson bill, but we cannot rely upon this hope. The lobby now in Washington is striving to shear the law of even its present restrictive and public protective features, to say nothing of excluding fresh ones. Even if the law is improved, we have many state laws to bear in mind. The only proper course for the Pharmacopoeia is to be complete and accurate and effective in itself, and thus independent of shortcomings in the law.

This defect is easily met by placing a statement in the preface that standards are to be construed as applying to that drug in any state or form that differs only physically or mechanically from the form described.

Various other similar questions regarding modifications of title have arisen. The name Colocynth is official, as is that of Bitter Apple. Everyone knows that "Colocynth Apple" means the same, and when a buyer receives a package so labelled, he expects to have colocynth. Yet a lawyer successfully contends that since this combination does not occur in the Pharmacopœia, the article sold under it is not subject to the legal requirements. This is a more difficult case to treat, but it would not be amiss for the preface to contain a statement to the effect that when an article is sold under a name or combination not found in the Pharmacopoeia or Formulary, but understood as applying to articles named therein, such articles shall be subject to the same requirements as though sold under official names.

It is specified that the seeds of Colocynth shall be removed "before using," but the claim is advanced that powdered or ground colocynth may be sold with the

seeds contained, notwithstanding that this insures its "use" in that condition. Similar conditions exist in case of other drugs, and might be provided for by a statement in the preface that the powdering or grinding of a drug is the first step in its use.

One of the commonest grounds of defense set up for the sale of adulterated drugs is that the law specifies that they are adulterated only when they fail to meet "the tests laid down in the Pharmacopoeia or the Formulary official at the time of the investigation," and that there are no "tests" meaning thereby chemical tests, for the leaves, barks, roots, etc. in question. This is a matter of vital importance in the enforcement of the law and it can be reached only by specifying in the preface that definitions, and descriptions of all kinds are to be construed as tests, within the meaning of the law.

It should also be definitely stated, that a chemical formula following a title is in the nature of a definition of that article.

Some radical action is also necessary to meet that part of the above clause which says "official at the time of the investigation." The preface should contain a clear statement that published supplements are parts of this edition then official, and such supplements, embodying new tests, should be published not less frequently than once a year. It is well known that as soon as the edition is published, adulterators begin to study for new methods which will escape the tests. If they succeed, then under this law, such adulteration must continue unchecked until a new edition is published.

Unless some such course is taken, we are worse off than we should be without the law, for we could then proceed under the general law against fraud, whereas now, the statute becomes an actual means of protection for the offender.

The definitions of the drugs must contain no statement as to the places of production except when it is really intended, for some special reason, to so restrict them. Otherwise, the Federal authorities will be compelled to exclude all lots of that drug that are produced in any other place.

There are many other respects in which definitions and descriptions must be framed in view of special considerations, never before entertained in Pharmacopoeia revision. Are we to retain the requirement that "Ergot" is to be derived from rye and not from wheat or from grasses which grow amidst the rye plants? If so, our description must be framed with such exclusion clearly in mind as an objective. We must also frame this so as to exclude ergot more than a year old, if we are to insist on that condition.

Belladonna leaves may be brown, as may Huanuco Coco leaves, without detriment to their quality; while the same color in Digitalis or in Truxillo Coca leaves, is to be regarded as a sure indication of serious deterioration.

Jalap may be dried by a degree of artificial heat that leaves a distinct odor of scorching, and even shows a slight superficial charring, without detriment to its medicinal properties, while the slightest odor of scorching in Elecampane or Gentian means serious damage.

Black pepper is subject to so many forms of adulteration, that its description must be carried out to minute details. Usually, we guard against an excess of starch, but in ground pepper, because of its common adulteration by the addition

of pepper shells, which contain no starch, we should specify that the starch should not be less than a certain amount.

There are, strange to say, cases in which adulteration should be required. Asafoetida, powdered without the addition of something to hold its valuable oil, must first have that oil evaporated off. Hence, an official powdered asafoetida without some such addition, is a practically worthless asafoetida.

Space will not permit the extension of all these principles to the individual articles but it is clear enough that, for the first time in the history of Pharmacopoeia revision, it becomes necessary to study each drug exhaustively in relation to the legal effects of every statement made concerning it.

Since writing the above, the following proposals for the text of the new Pharmacapoeia, and of the acceptance of which there seems to be some danger, have reached me. They violate the principles above enunciated.

Colocynth.

The omission of the word "peeled" from the definition, so that the Federal authorities will hereafter be compelled to prevent the importation of this drug, all of which is peeled.

Condurango.
Wild Cherry.
Viburmum.

No provision for any amount of adhering wood, which is always present, so that trade in these drugs will be prohibited.

Convallaria.

No provision for the presence of stems or foreign roots, which will exclude this drug from the country.

Hops.

A definition that permits the supply of hops from which the Lupulin has been partly removed.

Flaxseed.

All flaxseed would have to be rejected, because no allowance for foreign seeds, of which there are always some, is made.

Manna.

The wording of the description will exclude more than two-thirds of the manna of good quality. Great embarrassment has been caused the Federal authorities by the present text in this very direction.

Should these errors actually be perpetrated in the printed book, and a corresponding number occur in the treatment of the remaining drugs, it may be predicted that it will seriously cripple the work of administrators of the drug statutes, which would make it unacceptable, and compel a movement in the direction of something workable.

For the above reasons, I move that this section recommended to the revision committees of the Pharmacopoeia and Formulary the following action:

1. That the list of synonyms in the indices be extended to include all that are in common use.

2. That some provision be made, in all cases, for the presence of impurities in drugs, and that this provision be so worded as to make it sufficiently comprehensive.

3. That terms employed be sufficiently technical to leave no doubt as to their exact meaning.

4. That a statement appear in the preface, to the effect that requirements apply to the drug in any form that does not differ otherwise than physically or mechanically from that in which the drug is described.

5. That a drug under a name not found in the book, but which is a modificato the same article as that so named, shall be subject to all the requirements for the drug so understood.

6. That the preface contain a statement to the effect that the definitions and descriptions have the same force in requirements as the chemical and other tests.

7. That a chemical formula, following and applied to a title, is to be regarded as a definition.

8. That supplements containing additional tests, approved by the Committee, shall be published annually, and shall have the same force as the original text.

9. That definitions shall not contain any reference to the place of production, unless it is intended to restrict the drug to such geographical origin.

10. That, in general, the definitions and descriptions, before adoption, shall be carefully studied as to their exclusive effect upon trade in the article to which they apply.

11. That, in case of such drugs as asafoetida, which cannot be powdered in the pure state without first driving off an important part of the active constituent, the addition of a specific amount of a specific inert diluent shall be provided for.

THE RAW MATERIAL OF A HAPPY DAY.

Character is the sum of our habits, and they are formed for the most part unconsciously by daily repetitions and without definite plan. Doing what we dislike, the talk of a bore and the effect of "things going wrong" produce a mental state which, when it reaches the point of fatigue, produces a poison which alters the constitution of the blood. The constant recurrence of identical stimuli, i. e., the same thing over and over again, invites a form of fatigue, as when one is constantly associated with an unpleasant personality in the office or elsewhere. All this does not produce any serious result in the brain of the average man provided he has suffiient recuperative powers. In some it produces irritability, and irritability is a bad brick in the foundation of character. Mirth and humor are the antidotes for irritability. It is probable that the popularity of the comic opera and the buffoonery of the vaudeville stage are commercial attempts to supply, artificially, what habitual good humor would do of itself. The proper view to take of those we meet in daily life is to regard them as the raw material out of which we must make a happy day for ourselves, not by walking over them but by mingling with them on friendly terms.—*G. S. Hodgins.*