in the Pharmacopoeia, notably those that have been adopted in other pharmacopoeias. This research committee should be made up of qualified research chemists well paid for devoting all their time to revision research work and should work continuously year in and year out.

If the Committee is small and the experts employed on full time they might well and advantageously work in one research laboratory belonging to the Pharmacopoeia instead of having this work done, as it always has been, in the various laboratories of the country. As it is done now, conditions as to apparatus, methods of work, climatic conditions are different and in consequence not necessarily or probably uniform. A book of standards like the work of the Bureau of Standards should be worked out under standard and uniform conditions. This could be done at Washington in the Bureau of Standards under supervision of men selected by the Pharmacopoeial Convention but all working together under one roof and hence the same conditions, or in Philadelphia if deemed preferable. I am quite well aware that Philadelphia will protest against removing revision headquarters from Philadelphia, but a national book and a national standard should be national and have no local coloring or feeling about it.

WHY DOES THE PHARMACOPOEIA?

BY WILBUR L. SCOVILLE.

Habit is a factor with organizations as with men. The habit may be small and of little consequence, but it betrays an attitude nevertheless. It also helps in making for influence.

The Pharmacopoeia shows some habits which are neither essentially "bad" nor of great importance, but which are nevertheless significant. Perhaps they have been regarded as too trivial to consider. Nobody has seemed impelled to call attention to them. Probably it isn't good manners. But I have felt inclined to forget my manners and to criticize some of the habits.

The first habit to which I object has to do with certain titles. The habit of entitling tincture of tolu as *Tinctura Tolutana* and syrup of tolu as *Syrupus Tolutanus*, for instance.

The Latin writers tell us that *Tolutanus, a, um*, is an adjective, and so must agree with the noun *Tinctura* or *Syrupus*.

That silences us laymen, but does not convince. For it is not an adjective in its application. It is a noun. The English title is right—Tincture *of* Tolu. But any Latin student in High School who would translate *Tinctura Tolutana* as "Tincture *of* Tolu" would be immediately called to account.

The Latin title for Tolu is *Balsamum Tolutanum* and even this is translated "Balsam *of* Tolu." Consistency would make the tincture title *Tinctura Balsami Tolutani*, and if we abbreviate the construction and let "Balsami" be "understood" the title would still make Tolutani agree with the (understood) Balsami and the title would be Tinctura Tolutani. That is, at least, logical.

Where did this thing start, anyway? We take a substance, called Tolu or Tolu Balsam, or Balsam of Tolu, as you prefer, and we make a tincture of it. Then we are told that this substance, from which we have prepared a tincture is not a noun, but an adjective, and the proper title must deny its objectivity. I make bold to ask why? It is many years since I studied Latin, and I was not very proficient in it when I was under its tutelage. But if one is to know, one must ask. So I ask by what right Tolu is denied its noun privileges in Latin, and accorded them in English? Some of our Latin books make Tolu a Latin indeclinable noun. Then why not adopt that? But to say that a substance is an adjective quite confuses one. I cannot account for it, except as a habit.

Another habitual title is *Tinctura Aloes* (Lat. sing.) which is translated Tincture of Aloes (Eng. plural). Is there a plurality of Aloe in the tincture? It is all the more singular since Aloe is a juice, and we rarely speak of juices when applied to a single kind.

It has taken the pharmaceutical world a generation to get over saying "Syrup of Squills," after a patient emphasis on the point by our pharmaceutical editors and teachers. But wherein is "Tincture of Aloes" any better than "Syrup of Squills?" Or if "Tincture of Aloes" is a correct or preferable title, then why is not the Latin *Tinctura Aloarum* to agree? For the Latin and the English do not now agree—thereby again confusing our High School scholars.

After some years, the Ninth Revision has finally ceased saying "Oil of Cloves"—which is logically prepared from a plurality of clove buds—and it thus breaks one habit. But "Tincture of Aloes" still remains. And Aloe (Lat. sing.) is still translated "Aloes" (Eng. plural). Is this more than a habit?

Then there are indications of new habits in names and titles in the Ninth Revision. There are instances where one title stands for two or more different things and also where there are two names for one article.

We have been taught that Pharmacopoeial titles are specific, and stand for very definite articles of definite strength or purity. But there is a break in that now. Not only does the Pharmacopoeia recognize two or more different drugs under one title—to which there can be no objection when they are of equal value—but in two instances the drugs are not regarded as of equal value.

Asafoetida is one instance. Under this title is recognized gum asafoetida which must yield not less than 60 percent of alcohol-soluble matter, and also powdered asafoetida which must yield not less than 50 percent of alcohol-soluble matter. Thus asafoetida has a standard of 60 percent or of 50 percent as one chooses. For in compounding one can employ either the gum or the powder, since they both come under one title. Both are Asafoetida. If 50 percent of alcohol-soluble material is a sufficient standard it should apply to both forms. If 60 percent is a minimum for good quality, why not insist on it? For it is the function of the Pharmacopoeia to set standards, and if the powdering of asafoetida necessarily means a lowering of the standard then why recognize the powder? It is not really needed. Pharmacists can employ the gum exclusively.

Then take Ginger. Under the title *Zingiberis* are recognized six different botanical species. Presumably these are therefore equal in value. Other drugs have two or more species recognized when they are of equal value, and that is all right. But in Ginger the Pharmacopoeia allows any or all species to be used for making oleoresin, but restricts the tincture and syrup to one species, which is designated.

Now the curious part of this is that Tincture of Ginger is the only non-standardized tincture in the list to which special tests and restrictions are applied. These are evidently designed to insure against this tincture being employed as a "booze" to which use tincture of ginger has been credited. But if the design is to restrict Tincture of Ginger to medicinal use, isn't African or Cochin or another variety as good medicinally? Isn't Jam. Ginger nearer to Jag Ginger than any other kind? As a flavor, Jamaica Ginger is the mildest and pleasantest variety. And the Pharmacopoeia specifies it for its aesthetic rather than for its medicinal qualities. And then it seeks to discourage its use as a pure flavor.

In other instances—notably Benzoin—the Pharmacopoeia recognizes two different varieties which are doubtless equal in medicinal value but very different in aesthetic value. When a few years ago the writer tried the sale of tincture of Siam benzoin in place of the established tincture of Sumatra benzoin, he soon found that this aesthetic value was not appreciated by the purchasers. Customers began to ask for "the dark kind" and sometimes to bring back "the light kind." Persistent education might have taught them to prefer the Siam variety in time, but what's the use? It is only a matter of taste anyway. Taste can be recognized, but it is not practical to regulate it, and it is slow work directing it.

In the case of the Ginger would it not be more practical to allow pharmacists to select his variety to suit his customers? Business interests will regulate such selection. And if the medicinal value of the different varieties is equal—as is implied—then the only criticism that can be made is the aesthetic. And hasn't the person who prefers a strong, hot ginger as much right to his taste as the person who prefers a mild lemon-like ginger? Isn't the question essentially parallel to personal tastes for cheese? So if the six different varieties of ginger are all acceptable medicinally it is logical to allow them to be used equally. The Pharmacopoeia allows such choice for Methyl Salicylate, Benzoin, Cannabis and other articles.

Again, speaking of titles, we wonder why chloral (Lat.) is changed to chloralum? Latin books—(pharmaceutical) have given both chloral—is—3d declension, and chloralum—i—2d declension as proper forms. We have become accustomed to the first form, and it is quite as "classical" as the second. What is gained by the change? After we have learned "chloralis," wherein is the advantage of changing to "chlorali?"

But more puzzling still is the question why the Pharmacopoeia calls the thousandth part of a liter by two names. It is either a "milliliter" or a "mil" as one chooses. Mil as an abbreviation for milliliter is logical, and makes but one term for the article. But mil as a distinct and separate word means that the Pharmacopoeia is using two separate terms for one article. If mil is a proper designation for the article, why waste type and space in writing milliliter? If mil is "short" for milliliter it is properly an abbreviation, since nicknames are hardly in keeping with the dignity of the Pharmacopoeia. A milliliter, or mil, is a definite measure of capacity and admits of no variations. There are no permissible botanical species or natural and synthetic variations in the thousandth part of a liter, so two different terms for it do not appear to be in accordance with the habits of accuracy and explicitness which has characterized the Pharmacopoeia in the past. It should be either a milliliter, abbreviated mil., or it should be a mil and the longer word discarded.

It is generally understood that mil as a word was an afterthought. The Pharmacopoeia had been put into type, and the period after this term had been forgotten. Its absence was noted, and then to avoid the trouble and expense of punctuating the thousands of mils in the text, it was decided to call it a word instead of an abbreviation.

If this is so it but illustrates the need of time to think out the myriads of questions concerned in pharmacopoeial revision, to avoid making hasty conclusions. We venture to say that the idea of having two names for one article did not occur to the revisers. Five years to revise the Pharmacopoeia seems a long time to the man who is simply waiting for it, but when the need of thorough consideration for each of the many questions is noted, then one doesn't wonder that the mills necessarily grind slowly, and even then some chaff escapes.

Another habit which still holds is the aging of Tincture of Ferric Chloride. In the days of long ago when pharmacy was more of an art than a science, and when pharmacists made Solution of Ferric Chloride for use in the tincture, they were not so particular to drive out the last traces of nitrous oxide which is formed in the reaction. This small amount of nitrous oxide, in connection with the little free hydrochloric acid, formed a fragrant ester with the alcohol in the tincture and made a riper and more pleasant tincture. But now the Pharmacopoeia requires that the active agent in forming this fruity flavor be entirely removed from the ferric chloride solution, and still imagines that the ester will be formed according to the three-months rule. But if any is formed it requires some imagination to find it. The average nose will find it doubtful, at least, and the tongue will fail to recognize it. If our drug inspectors have any method of deciding whether a given sample of Tincture of Ferric Chloride is officially aged or not, I, for one, would be much interested in learning it. But the tradition must be honored, and the tincture prepared three months in advance of its use because our fathers—well, they made a better tincture than we do, didn't they? and we must honor their method but decry their science. Is this anything more than a habit?

Well, the Pharmacopoeia has shown that it can break as well as make habits, and perhaps the new Revision Committee will turn over a new leaf in some of the above respects when somebody is bold enough to call attention to them.

ORGANIC CHEMICALS OF THE UNITED STATES PHARMACOPOEIA IX.

BY GEORGE D. ROSENGARTEN.

In the revision of Organic Chemicals of the United States Pharmacopoeia, it has been the aim of the Committee to achieve accuracy, and in addition it has been the endeavor to employ explicitness in all statements combined with simplicity, and further to fix standards on a plane not beyond practical attainment, but affording the desired standard of therapeutic efficiency.

It may be noted that the texts of Organic Chemicals are considerably shorter, in many instances, than in the former revision. The reason for this is quite apparent, as many superfluous tests and statements have been discarded. The purpose of the Pharmacopoeia is the standardization of drugs and chemicals, and for this reason it matters not how a chemical may be produced, provided it possesses the required properties and meets the demands for purity. Manufacturing processes have therefore been omitted. A further contraction of the text was brought