

a "Model for a Modern Pharmacy Law" as reported in the July number of the JOURNAL OF THE A. PH. A. has prepared the way, and it would be ideal if through the concerted action of the State Boards of Pharmacy, the National Association of Boards of Pharmacy, and this Section on Education and Legislation, this model law could be enacted in the different states. However, it might be suggested, rather than try to have the proposed law enacted in its entirety, to keep it before pharmacy as an ideal law, and concentrate efforts to have three or four of the sections of the law which are most needed, and which are very vital to pharmacy, enacted first, to be followed by concerted action to have the other sections enacted in the different states as expeditiously as deemed advisable.

Incidentally, it is hoped that by the time the different states are ready for enactment of pharmacy laws pertaining to the recognition of colleges and schools of pharmacy, it will only be necessary to have the different Boards of Pharmacy accept the standards that will have been established by the American Conference of Pharmaceutical Faculties and the Section on Education and Legislation of the A. Ph. A. for such colleges and schools, rather than to have the Boards of Pharmacy themselves make and promulgate the requirements for recognition.

In closing let me urge that the American Pharmaceutical Association pay particular attention to the standardization of pharmaceutical education and legislation.

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STANDARDS OF ARTICLES DELETED FROM U. S. P. AND N. F.*

BY OTTO RAUBENHEIMER.

The object of this paper is to show the necessity of a clear understanding as to the standards of articles, be they drugs of animal, vegetable or mineral origin, or preparations, deleted from the U. S. P. and N. F. This is no doubt a subject of vital importance to manufacturers, wholesale and retail druggists and the officials charged with the enforcement of the "Food and Drugs Act."

Sec. 7, I, of the latter states: "A drug is adulterated when it differs from the standards, etc., laid down in U. S. P. or N. F., *official at the time of investigation.*"

Regulation 7 as to Standards of Drugs states:

b, Name recognized in U. S. P. or N. F.

In this Regulation no statement is made "official at the time of investigation," and consequently the meaning of this Regulation can be construed that, when a name of a drug official in an older edition of the U. S. P. or N. F. is used, the standards of that edition will apply. Or, in other words, if a drug is deleted from the U. S. P. or N. F. the last standard will hold good. This seems reasonable and plausible, and any well-meaning pharmacist will approve of it. I have not the least doubt that the honest, conscientious pharmacist will always dispense the particular drug which the physician has in mind, the drug which has a standard either in the present or former editions of the U. S. P. or N. F.

I am fully aware that there is a set of men who hold the opinion that as soon as a drug is deleted it is no longer official, it has no more standards, it is an outcast

* Section on Education and Legislation, A. Ph. A., Cleveland meeting, 1922.

and no code of ethics or morals applies to it. I am also aware that no sooner is a preparation deleted than some manufacturers and some druggists adopt different formulas *which yield not better but cheaper preparations*. I am sorry to say that "money talks," even in medicines!

Let us see what is the legal status of medicines deleted from the pharmacopœias in other countries.

The Austrian Pharmacopœia VIII, *Pharmacopœia Austriaca, Editio Octava*, 1906, makes the following statement on p. XXI under *Regulae et notae generales*:

2. *Praeparata exposita guidem in editionibus prioribus*****—which translated means

2. Preparations, still in use, but official in former editions of the Pharmacopœia, must be manufactured according to the last official formula and must be labeled accordingly; such preparations must be dispensed according to the rules laid down in the respective Pharmacopœia.

The 5th edition of the French Pharmacopœia, *Codex Medicamentarius Gallicus*, 1908, devotes the following three paragraphs to this important question on p. XVIII:

Au subject des suppressions.

La Commission générale.

Il en est autrement.

This translated and abbreviated has the following meaning:

a. In regard to deletions an important question has arisen: Do the deleted medicaments continue to have a legal status or are they to be considered as secret remedies?

b. The General Commission decided: The Codex is a collection of all editions and consequently a medicament, once official, always retains its legal status.

c. When a formula is modified, the latest one becomes the official one.

This shows that at least two foreign pharmacopœias long ago recognized the necessity of the legal status of deleted articles and have included statements to that effect.

In my work as retail pharmacist behind the drug and prescription counter and as a teacher coming in contact with many students and other pharmacists, I have learned to my sorrow that preparations deleted from the U. S. P. and N. F. are not always manufactured according to the last official formula and standard. Owing to this fact prescriptions, especially renewals, have different physical properties, especially as to color, odor and taste, causing a good deal of trouble and annoyance to the dispensing pharmacist. Besides, if the strength of the preparation has been changed, and especially reduced, the medicine will not have the desired action and will be a disappointment to patient and physician.

In a discussion on the National Formulary at the June 1921 meeting of the New Yorker Deutscher Apotheker Verein, I was instructed to bring the subject of "Standards of Deleted Articles" before the Atlantic City Conference (June 1921) of the N. F. Committee. This Committee then adopted a motion to insert a statement into the Preface of the new N. F., "When articles deleted from U. S. P. or N. F. are called for, the latest published official formula should be dispensed." (N. F. Bull. No. 21, p. 88.) During the year a reconsideration of this motion

was adopted (N. F. Bull. No. 33, p. 169), but finally the original motion was again carried by a vote 9 to 5 (N. F. Bull. No. 35 179).

At the annual meeting of the New York State Pharmaceutical Association during June 1922, at Richfield Springs, Prof. Wm. A. Mansfield, chairman of the Committee on the National Formulary, presented the following resolution, which was adopted:

"In case a N. F. preparation is modified or deleted, the one last official is the one to be dispensed.

"We recommend the inclusion of such a statement in the new N. F."

At the annual meeting of the New Jersey Pharmaceutical Association during June 1922, at Lake Hopatcong, the writer presented a paper, "Standards of Deleted Preparations" (see *Am. Jour. Pharm.*, August 1922), in which I called attention to the advisability of deleted preparations complying with the standards of U. S. P. or N. F. in which they were last official.

During the two years in which this question has been on my mind I have had a good deal of correspondence on this subject, from which I will quote the following:

From the president of a state pharmaceutical association: "Personally I assume that all pharmacists would naturally adhere to the formulas which were once official."

From a prominent member of the A. Ph. A., pharmacist, teacher and lawyer: "In my opinion the standards should be those which were last official, unless there should be some very good reason for a different standard. In the vast majority of cases, however, I fancy the former official standard would answer every requirement."

From a government official charged with the enforcement of the "Food and Drugs Act:" "The standard formerly prescribed will be used as a basis of adulteration. Personally I think it would be well for the A. Ph. A. and other bodies to put themselves on record at their next annual meeting relative to the desirability of continuing present standards in the U. S. P. and N. F. for drugs that may be deleted therefrom."

CONCLUSION.

While it seems to be generally understood among the better class of manufacturers, wholesale and retail druggists, and dispensing pharmacists, that the standards of U. S. P. and N. F. should hold good even for deleted articles, it is very desirable to have a clear understanding on this very important subject.

ADVANTAGES OF STANDARDS FOR DELETED DRUGS.

1. Legal necessity, clearing up the existing uncertainty.
2. Guide for manufacturers, wholesale and retail druggists and dispensing pharmacists.
3. Guaranty for physicians and patients to obtain standard medicines.
4. Teaching the pharmacist to look and how and where to look for these standards.
5. Strengthening the standing of U. S. P. and N. F. as law books and legal authorities.

In conclusion I would suggest the following remedies:

1. Amendment to Food and Drugs Act.
2. Ruling by the Department and publication of a Regulation.

3. The inclusion of a suitable statement in U. S. P. and N. F. Such a statement should not be hidden, but should appear in a prominent position. *It should also be added under the list of Deletions.* As stated above, the N. F. Committee has already adopted the inclusion of such a statement. Will the U. S. P. Revision Committee follow?

BROOKLYN, N. Y.,
AUGUST 1922.

CHEMICAL CHRONOLOGY.*

BY OTTO RAUBENHEIMER.

"Histories are as perfect as the Historian is wise
And is gifted with an eye and a soul."—Carlyle.

"Pharmacy is the Mother of Chemistry" was the slogan frequently used by such an authority as Dr. Paul Walden, of the University of Riga, in his address before the Section on Pharmaceutical Chemistry of the Eighth International Congress of Applied Chemistry during September 1912 in New York City, of which the writer was acting secretary. Pharmacy, therefore, can be justly proud of her daughter, Chemistry, and pharmacists should continue to take an active interest in this science.

Quite a number of books have been published on the History of Chemistry, of which I will enumerate the principal ones. As usual, Germany leads with the following works:

Kopp: "Geschichte der Chemie 1843."
Kopp: "Beiträge zur Geschichte der Chemie 1869."
Kopp: "Entwicklung der Chemie in der neueren Zeit 1871."
Kopp: "Alchemie in älterer und neuerer Zeit 1886."
Meyer: "Geschichte der Chemie 1888."
Ekecrantz: "Geschichte der Chemie 1913."
Hjelt: "Geschichte der organischen Chemie 1916."
Gräbe: "Geschichte der organischen Chemie 1920."
Färber: "Die geschichtliche Entwicklung der Chemie 1921."

France can boast with the following two masterworks:

Höfer: "Histoire de la Chimie 1867."
Berthelot: "La chimie au moyen age 1893."

Among the works on history of chemistry in Great Britain I will quote the following:

Meyer-McGowan: "History of Chemistry, 1891."
Brown: "History of Chemistry, 1913."
Tilden: "Chemical Discovery and Inventions in the 20th Century, 1916."
Tilden: "Famous Chemists, 1921."
Hilditch: "Concise History of Chemistry, 1911."

In the United States the literature on the history of chemistry is fast developing, especially of late:

* Section on Historical Pharmacy, A. Ph. A., Cleveland meeting, 1922.