DEVELOPMENT OF THE NATIONAL FORMULARY.*

C. M. SNOW.

The preparation of this paper has developed so many, to me, interesting bits of history, that I beg your indulgence, if it seems to partake of the nature of a paper for the Historical Section, rather than a discussion of the new National Formulary.

It seems to be quite universally accepted, that the attention of the American Pharmaceutical Association was first directed to the necessity of preparing a formulary of unofficial remedies some time about 1880, but upon consulting the very first volume of the proceedings of this Association, we find that in 1856, Mr. John Meakin, president of the Association, offered the following resolution, which was adopted: "Resolved, that with the view of more effectually carrying out the expressed wish of many of the members of this Association, for the compilation of unofficial formulas in local use with many physicians of our Union, a committee be appointed to collect such and report to the next meeting."

In accordance with this resolution, a committee of ten was appointed and the report at the next meeting shows that formulas for eighty-three preparations were submitted and adopted. The committee also recommended that these be appended to the pharmacopoeia for convenient use, but this recommendation seems never to have been carried out.

The following is one of the formulas contributed by a Boston member:

TINCTURE OF ALKALI COMPOUND.

Hard Wood Ashes..... O. ii
Common Soot.....Wineglass, i
Aquae ..... O. vi
M. Digest, settle, filter and sometimes add
Opii Tinct..... dr. ii to oz. iv of the mixture.
Dose: Tablespoonful 3 times each day.

While this seems to be the first mention made of an unofficial alkaline solution, we do *not* claim for it that it is the "original" Liquor Antisepticus Alkalinus.

The work of the committee was evidently looked upon with much favor, as it was continued and its membership increased to fourteen.

The next year the committee reported nineteen formulas.

The following paragraph of the report indicates, that the first as well as all subsequent committees on non-pharmacopoeial formulas was subjected to rather unjust criticism:

"Your committee regret that they have been compelled, through the misconception of a few, to disclaim any desire to collect the formulae for nostrums or proprietary medicines; feeling assured that the Association has no affinity with such, they had hoped that the purpose of the committee would not be thus

*Read at the February meeting of the Chicago Branch.

misconstrued and desire that the result of their labors may contribute to the usefulness of the Association."

The committee was then discontinued.

It was in the early '70s that the physicians seemed to have first strayed away noticably from the remedies found in the pharmacopoeia. This condition was, no doubt, much influenced by the manufacturing pharmacists, who had by this time become very active in placing on the market, preparations made up with vehicles of sweetened, aromatic, hydro-alcoholic liquids.

The mercantile tourists in the employ of the manufacturers were as energetic in the introduction of these proprietaries, as they are at the present time, laying great stress on the "elegant pharmacy" of which these mixtures were representatives.

Under the conditions in those days, we recognize another confirmation of the saying "There is nothing new under the sun"; for then, as now, the pharmacists came forward with the complaint, that they were obliged to carry the nostrums of every manufacturer to be able to faithfully fill the orders of the physicians, the physicians as long as thirty-five years ago specifying some particular manufacturer's product. The pharmacists of that day were confronted by the same conditions as those which have led to the strenuous efforts of the active associations of the present day in their diligent struggle for the maintaining of the uniformity of formulas and to present to the physicians the value of adhering more closely to the preparations of the pharmacopoeia and particularly the National Formulary, which is practically the outcome of similar conditions beginning forty years ago.

As early as 1883 members of the American Pharmaceutical Association pointed out the alarming increase of proprietary medicines, as is evidenced by the following extract from the proceedings of that year: "It is ordered that a committee be appointed to present at the next meeting of the Association a list of non-official formulas, such as would meet with the requirements of the pharmacists of the country in enabling them to prepare such of the various elixirs, emulsions, fluidextracts, wines, ointments, etc., as are prescribed by the medical fraternity and supplied by manufacturing chemists, through the wholesale trade and otherwise. Although differing slightly, the preparations supplied by so many different firms are in the main identical. Yet in order to be able to comply faithfully with the demands of the physicians, all these kinds must be kept in stock, greatly to our detriment, and we think, in the end, to the consumer. Seeing this to be the case, efforts have been made in the different pharmaceutical bodies to remedy the evil, by furnishing formulas which the average pharmacist could prepare himself and dispense with the assurance that they contained the ingredients specified and of the best quality. The result if attained would be advantageous to the physician, pharmacist and patient alike, both therapeutically and financially, and remove the source of much annoyance and misunderstanding, as at present, a prescription filled in one locality, if refilled in another where the dispenser is not familiar with the requirements of the prescriber, unless some particular maker's preparation is specified or formula furnished, is likely to have the preparation returned, with many unflattering comments—resulting too

often in the loss of a customer." The resolution was adopted and a committee appointed, the personnel being:

J. W. Colcord, Lynn, Mass.
S. A. D. Sheppard, Boston,
Ewen McIntyre, New York,
J. T. Shinn, Philadelphia,
N. H. Jennings, Baltimore,
Chas. Becker, Washington,
J. D. Wells, Cincinnati,
M. W. Alexander, St. Louis,
C. L. Keppler, New Orleans,
E. T. Cowdrey, Chicago,
Emlen Painter, San Francisco.

But at even an earlier date than this, the members of the several pharmaceutical bodies of New York and Brooklyn, recognized the need and advantage of something to unify the different formulas used in these and adjoining cities. At a meeting of the New York College of Pharmacy, the German Apothecaries' Society and the Kings County Pharmaceutical Society, a joint committee was selected representing the best talent in the different societies and cities. This committee labored diligently and in an incredibly short time provided a particularly good volume, styled The New York and Brooklyn Formulary. The following introduction was printed in this Formulary:

To the Medical Profession:

The favor with which some of the preparations of the so-called "Elegant Pharmacy" have found with the medical profession during the past ten or fifteen years, has induced many manufacturers of Elixirs, Syrups, Emulsions, etc., to vie with each other, in the introduction of new combinations or to imitate each other's products, as soon as any of the latter appear to have acquired a ready sale. Quite commonly each manufacturer claims for his particular products the distinction of "superiority of manufacture" and "purity of materials." The physician prescribes the several makers' products in turn and thereby compels the pharmacist to provide himself with separate packages of each maker's preparations, many of which are left on his shelves, after the first or second call, so that the collection, finally, represents quite a respectable investment or rather a dead loss, since the articles deteriorate more or less rapidly and can not be sold in the market. Recognizing the ephemeral character of such products and relying on the further support on the part of the medical profession, the manufacturers keep on increasing the number of their preparations, and do not fail to present sample bottles of each to the physicians, who, thereupon, frequently prescribe them one by one and thereby increase the pharmacists' dead stock—an everlasting reminder of poorly invested capital.

The practice leads to another deplorable evil, namely to this, that the patient knowing the names of the articles and of the manufacturer, will procure them subsequently on his own responsibility, at wholesale prices, without further reference to the physician or pharmacist. These goods, also, induce unscrupulous and uneducated people to play doctor, since the labels pretend to give all sorts of therapeutic information, recommending the contents in this or that disease and specifying the doses to be administered. Naturally, this intolerable annoyance is sorely felt wherever it exists. It has been prescribed and publicly denounced by the representative pharmaceutical bodies of New York and Brooklyn and delegates were chosen from each over a year ago, to form a joint committee which should devise and publish practical formulas for such preparations of the "so-called" "Elegant Pharmacy" as appear to have established a claim to recognition and have survived out of the endless number offered to the medical profession.

With this modest little book, which is herewith respectfully submitted, the Joint Committee offer to the physicians and pharmacists of our sister cities, the result

of their thoughtful labor and skill—a result reached only through a large number of experiments made especially for the purpose. The Joint Committee would respectfully request the medical profession to abstain, hereafter, from designating the maker's name of any preparation for which a formula is found in this pamphlet. Thus both physician and pharmacist will be sure to obtain uniform preparations, no matter where they are dispensed.

At the time the efforts of the American Pharmaceutical Association Committee on National Formulary had crystalized into the adoption of the work by the Association, the New York and Brooklyn Formulary was in the process of its third revision. It is interesting to note that the Formulary contained receipts for the making of eighty-three preparations, and of these fifty-two were elixirs. It must have been especially gratifying to the Association to have this Formulary offered in toto, as a nucleus for the proposed National Formulary, as adopted at the meeting of the Association at Pittsburg, in 1885. The New York and Brooklyn Formulary was offered and accepted at the same meeting. The gratitude and appreciation of the Association is shown in the personnel of the Committee on National Formulary chosen at that time:

Dr. Chas. Rice, Chairman, W. P. DeForest,
P. W. Bedford, S. J. Bendiner,
A. Tsheppe.

Four of these gentlemen being members of the Editing Committee, which tendered the New York and Brooklyn Formulary to the Association. As an indication of the ability of the Chairman of this Committee, let it be remembered, that he was selected as Chairman of the Revision Committee for the Pharmacopœia for 1890 and 1900.

This committee was instructed by resolution to continue and complete the revision, then so well under way, with a view to making it national in its character.

The following year the committee was directed to prepare a preliminary draft of the National Formulary, which was to contain all the work done up to September, 1886. This draft was published in the proceedings of the Association for 1886, reprints were also made and circulated. The draft contained formulas for 414 preparations, and many of them enjoy much favor today.

At that time the committee also submitted a number of recommendations, the first of which was on the scope of the National Formulary and anent the discussion of what shall and what shall not be admitted into the coming revision, you will be interested in hearing what the founders of the work intended to have appear on its pages.

"SCOPE OF THE NATIONAL FORMULARY."

"The National Formulary to be published under the authority of the American Pharmaceutical Association, may contain the formulas of such preparations as have either been formerly official in the United States Pharmacopœia and have been discarded, though still in demand; or such as have never been official but deserve recognition, because more or less in general use. Among the latter, may be any preparation contained in foreign pharmacopœias if there is known to be a sufficient demand for them, in any section of the country. It shall also contain the preparations belonging to the so-called 'elegant pharmacy' but it shall not be encumbered with purely technical, trivial or fancy preparations."

From this it may be clearly understood, that it was not the intent of these earnest and, beyond question, most able pharmacists, to have "test-tube doctors" and pharmacists who do not practice pharmacy, dictate the make-up of the book.

It is my contention, that if any considerable number of real physicians use any remedy for the relief of the sick, such remedy should be recognized by the National Formulary and directions given for its uniform preparation, no matter how rabidly it may be attacked by those men who have taken the didactic work prescribed for the degree of Doctor of Medicine, but who practice only in glass, in laboratories.

You need not be told that it will matter not one iota to the physician who uses the drug with success, whether or not it is in the Pharmacopoeia or National Formulary; he will continue to use it just the same. And you may rest assured, too, if directions for its preparation are not given in the official volumes, the manufacturers will prepare it and each will vary the combination sufficiently, so that when it gets to the physicians, you will have to stock another dozen or so forms of an additional preparation.

The first issue of the National Formulary was published and circulated in 1888 and contained 435 formulas.

The first revision appeared in 1896 and gave formulas for 454 preparations. The greatest innovation in this volume being the adoption of the metric system of weights and measures, and which, according to the preface, "placed the National Formulary abreast of the times and its text in harmony with that of the United States Pharmacopoeia of 1890."

Our good friend, Professor C. Lewis Diehl, was Chairman of the Committee on National Formulary at the time, having been so appointed in 1888, and we are pleased to say, still continues in that responsible position. The third issue of the book, and the one now official, came out in 1906. It was delayed because of the belated appearance of the eighth revision of the pharmacopoeia. This time the Formulary gave the quantities, not in the metric system alone, but in the apothecaries' as well.

The conversions necessary, because of the two systems, were arduous, and proved to be a serious handicap to the book. Because of the slight variations in changing from one system to the other, more complaint came than from all other criticism together. Average doses were introduced for the first time. Still another innovation was the separation of the obsolete pharmacopœial preparations from the main text of the book and collecting them in an Appendix. Forty-nine new formulas were added, 617 formulas in all.

Hardly had the second revision been issued when the highest possible honor came to the Formulary, for it was in that same year that it was designated as a standard for the administration of the Pure Food and Drugs Act.

Let us all here understand that to no one, so much as to our beloved and lamented benefactor, Albert E. Ebert, is due the credit of bringing this honor to the Formulary.

Being now made a legal standard, the Formulary was promptly attacked from all sides, not only for the errors it did contain, but because of the definitions for standards it did not contain.

Appreciating the responsibility now carried by the National Formulary, the Association urged its early revision.

At this time the Committee on National Formulary comprised only five members, with an auxiliary committee of ten. In 1908, the Association met at Hot Springs, Ark., the Committee on National Formulary convened a few days in advance of the regular meeting and did an immense amount of work on the Formulary.

The following are some of the recommendations of the Committee which were adopted at that time:

That the Committee on National Formulary consist of fifteen members, selected by the Council of the Association, for the full period of the revision.

That the book be called simply, The National Formulary.

That the strength of the preparations be stated, as so many grams in one hundred cubic centimeters.

That the metric system alone be used.

That all formulas be in uniform style.

That a statement be inserted in the preface to the effect that the National Formulary does not assume any responsibility for the therapeutic value of any preparation, and that the question of *additions* and *eliminations* be decided on the *basis of commercial demands.*

That suitable definitions for unofficial ingredients be inserted.

That the term "Appendix" be eliminated and the book be designated as parts one and two.

That no trade-marked titles be introduced.

The nomenclature, titles and synonyms should be in conformity with the U. S. P. or with modern ideas, should be descriptive of composition and that therapeutic or anatomical titles should be discouraged.

Authority given to the Committee to establish a specific date on which the next edition of the National Formulary go into effect.

The Chairman has divided the Committee into four subcommittees.

To Subcommittee "A" is intrusted the task of defining and if necessary establishing standards for ingredients not now official. This subcommittee has six members, divided into two groups of three members each.

To Subcommittee "B" is assigned the task of working out formulas for new preparations and this committee has nine members divided into three groups of three members each.

Subcommittee "C" examines and passes judgment on the reliability of the formulas furnished. There are three members of this subcommittee.

Subcommittee "D" is charged with furnishing correct nomenclature and constructing the text of the Formulary. There are three members of this subcommittee.

In the prosecution of the work, all communication is by correspondence, which means of course a considerable loss of time. First the individuals on the subcommittee must agree on the results attained in their assignments and as rapidly as possible forward the findings to the Chairman of the General Committee, who causes bulletins to be issued and mailed to all the members of the committee, for individual review and comment. A little later a vote is taken to determine whether it is the sense of the whole committee that the findings of the sub-

committee be adopted or rejected. By these methods fairly good progress has been made. The Association and the Committee are under many obligations to the Surgeon-General of the Public Health and Marine Hospital Service and to Mr. M. I. Wilbert for the preparation of the bulletins and voting sheets used in this work. Mr. Wilbert, who is a member of the Committee on National Formulary, is also a member of the Surgeon-General's staff and it is under his direction that the bulletins are issued, which keep us so well informed as to what is being done by the different subcommittees.

Since the apportioning of the work as has been outlined, the committee has had two opportunities for personal conference, at Richmond, Va., in May, 1910, and in Boston, August, 1911. At both of these meetings much was accomplished.

One of the resolutions adopted by the Committee authorizes the Chairman to submit through the pharmaceutical press or through the Secretaries of the Local Branches of the American Pharmaceutical Association, for discussion and experimentation, such of the proposed changes and additions as may be subject to additional improvement. In accordance with this resolution some five installments have been published and the responses received, verifies the wisdom of such procedure.

With the adoption of the Pure Food and Drugs Act, it seemed advisable and the Committee was instructed to include in the coming revision, a statement of the alcoholic content of the various preparations. To this end a subcommittee was appointed to make the determinations and entered vigorously upon the work. It now appears, however, that the resolution is of doubtful value. In the first place the P. F. & D. Act applies only to interstate commerce and hardly concerns the retail pharmacist. If now the National Formulary as a legal standard designates a definite alcoholic strength for a particular preparation such strength will be mandatory, and even a slight variation, will in the eyes of the Commission charged with the enforcement of the Pure Food and Drugs Act constitute a violation. You who have had experience in making preparations appreciate how extremely difficult it is to have them always agree in alcoholic strength, because of the condition of the drug, as to moisture when extracted, care in keeping percolator and percolate covered to prevent volatilization and the method of keeping the finished product.

To indicate how closely the Government watches for such violations, a United States Solicitor has had one manufacturer indicted because his preparation varied 1.5 per cent. in alcohol from the statement made on the label. Now we know that the average manufacturer is in a better position to determine and adjust alcoholic percentages than is the retailer and unless a liberal range is permitted, such statements are rather likely to prove a burden than a benefit to the retail pharmacist. Under these circumstances the Committee is quite ready to recede from its original position, for the present. It does, however, seem that the statement of alcoholic content of preparations should be given in the succeeding revision as it is desirable information and the fact that so many of the States are framing food and drugs acts to conform to the Federal Act will probably make it necessary for the retailer to sooner or later give the alcohol percentage of preparations on the label of his products and the Pharmacopœia and National Formulary should supply this data.

The matter of standardizing the coloring agents of the Formulary, tinctures of cudbear and caramel, has received the very earnest attention of a number of the ablest members on the Committee and it seems quite likely that in the fourth edition, we shall have the means of ending the trouble now so persistent in the use of these coloring media, the inability to get shades in preparations to agree at different times. Perhaps the greatest innovation in the way of new preparations is the introduction of Fluidglycerates. These are of the same strength of the fluidextracts but contain no alcohol, hence mix clear with aqueous solutions. Another matter that has somewhat perplexed the Committee, is, how far shall it be influenced by manufacturers, as to the admission or exclusion of formulas. Another of the added features of the book which is taking a great deal of time, is the preparation of the standards and descriptions of the articles which enter the preparations but for which no standards have before been offered. These will approximate 500 and will probably be grouped in Part II of the book. Up to the present time no one has ventured a definite statement, as to when we might expect to have the new book for use, but it does seem now that we may reasonably expect it before the coming meeting of the Association in Denver. In closing, permit me to say, that from the matter contained in the bulletins thus far circulated, I truly believe the retail pharmacist will find in the "N. F. IV" the most perfect and valuable book ever offered to American pharmacists.

THE RICHARDSON BILL.*

F. W. NITARDY.

The December issue of the Western Druggist contains an editorial entitled, "A Bill to Kill All Ready-Made Remedies." The article in question regards the Richardson Bill as a "Doctor's bill designed to destroy practically every proprietary medicine; to prohibit any druggist putting up a line of his own remedies, and to compel every person to be held up for a doctor's fee every time even the simplest remedy is needed."

Copies of the editorial in question must have been sent broadcast over the country. Several Denver dailies mentioned it and one printed the entire article under big headlines "Druggists Protest," or something similar.

That the article referred to does not express the sentiment of the retail druggist is very clear to any one familiar with matters pharmaceutical.

Both the JOURNAL of the A. Ph. A. and the N. A. R. D. Notes speak of the Richardson bill in quite different terms, and these journals are representative, published by and in the interest of druggists, and cannot be bought to advocate or denounce a certain measure as may suit the buyer.

In the issue of February 8 of the N. A. R. D. Notes, the editor speaks as follows:

"Notes and the N. A. R. D. are not in favor of the passage of the Richardson bill in its present form.

"Notes and the N. A. R. D. are in favor of the principle of the Richardson bill."

*Read before the Denver Branch.