# COMMITTEE REPORTS

## REPORT OF THE NATIONAL FORMULARY COMMITTEE.*

BY WILBUR L. SCOVILLE, CHAIRMAN.

*To the American Pharmaceutical Association:*

The first National Formulary appeared in 1888. The Fifth National Formulary was issued in 1926—38 years after the first. It is worth while for the ASSOCIATION to note how well it builded, and to take account of the way pharmacy has developed during these years.

### THE PAST.

The first edition was compiled by a committee of five residing in New York and Brooklyn, and assisted by representatives of thirty-five of the States. The editing committee was headed by Dr. Charles Rice, one of the most eminent pharmacists that this country has developed and later the chairman of the Eighth Revision Committee of the U. S. P. His associates were P. W. Bedford, then Professor of Pharmacy in the New York College of Pharmacy, and three leading professional pharmacists, S. J. Bendiner and A. Tscheppe of New York and P. W. DeForest of Brooklyn. These men faced a task which had been dragging on for nearly thirty years and in which the discouraging factors loomed large. There was very little of direct incentive to make a careful and thorough work, but these men were not content to do less. That the first book was a true foundation for growth is now clearly seen, and great credit is due to these founders.

They builded better than they knew—both in the way of professional pharmacy and of its financial support.

The soundness of the first edition is shown in the following table of comparative contents of the first and subsequent editions. This shows that 45 per cent of the formula contents of the original work has gone through the five editions and still finds a place as live items in pharmacy.

TABLE SHOWING THE RELATIONS OF PREPARATIONS IN THE FIVE EDITIONS OF THE N. F.

| | N. F. I. | N. F. II. | N. F. III. | N. F. IV. | N. F. V. | Carried through. |
|---|---|---|---|---|---|---|
| Ampuls | 0 | 0 | 0 | 0 | 7 | 0 |
| Cerates | 1 | 3 | 4 | 5 | 3 | 1 |
| Collodions | 4 | 4 | 4 | 5 | 3 | 1 |
| Decoctions | 1 | 1 | 3 | 1 | 0 | 0 |
| Elixirs | 86 | 86 | 88 | 76 | 65 | 35 |
| Emulsions | 17 | 15 | 15 | 8 | 5 | 3 |
| Extracts | 2 | 3 | 12 | 13 | 14 | 1 |
| Fluidextracts | 51 | 45 | 52 | 90 | 104 | 35 |
| Fluidglycerates | 0 | 0 | 0 | 5 | 5 | 0 |
| Glycerites | 7 | 5 | 6 | 6 | 5 | 4 |
| Glycerogelatins | 0 | 0 | 4 | 4 | 4 | 0 |
| Infusions | 2 | 3 | 4 | 5 | 4 | 2 |
| Inunctions | 0 | 0 | 0 | 2 | 2 | 0 |
| Liniments | 8 | 10 | 11 | 9 | 12 | 4 |
| Liquors | 41 | 45 | 55 | 54 | 37 | 13 |
| Lotions | 4 | 4 | 4 | 4 | 7 | 3 |
| Mixtures | 24 | 25 | 25 | 20 | 13 | 10 |
| Mucilages | 3 | 4 | 4 | 2 | 2 | 2 |
| Mulls | 0 | 0 | 4 | 4 | 4 | 0 |
| Oils (compounded) | 3 | 3 | 4 | 6 | 5 | 3 |
| Ointments | 5 | 8 | 11 | 12 | 19 | 5 |
| Oleates | 4 | 4 | 4 | 5 | 2 | 2 |
| Pastes | 0 | 0 | 7 | 7 | 7 | 0 |
| Pencils | 0 | 0 | 2 | 1 | 1 | 0 |
| Petroxolins | 0 | 0 | 2 | 20 | 17 | 0 |

* Presented at the Philadelphia meeting of the AMERICAN PHARMACEUTICAL ASSOCIATION, 1926.

| | N. F. I. | N. F. II. | N. F. III. | N. F. IV. | N. F. V. | Carried through. |
|---|---|---|---|---|---|---|
| Pills | 27 | 27 | 29 | 30 | 23 | 12 |
| Plasters | 3 | 7 | 13 | 2 | 2 | 1 |
| Powders | 15 | 16 | 21 | 14 | 13 | 7 |
| Salts, Effervescent | 7 | 12 | 11 | 7 | 9 | 6 |
| Species | 3 | 3 | 3 | 3 | 3 | 3 |
| Spirits | 12 | 9 | 14 | 9 | 11 | 5 |
| Sprays | 0 | 0 | 0 | 5 | 5 | 0 |
| Syrups | 35 | 38 | 44 | 44 | 37 | 16 |
| Tablets | 0 | 0 | 0 | 0 | 7 | 0 |
| Tinctures | 32 | 34 | 46 | 50 | 55 | 21 |
| Troches | 0 | 2 | 9 | 9 | 2 | 0 |
| Waters | 3 | 2 | 1 | 1 | 2 | 2 |
| Wines | 12 | 15 | 14 | 15 | 0 | 0 |
| Miscellaneous | 43 | 28 | 53 | 19 | 20 | 7 |
| Total | 455 | 461 | 583 | 572 | 536 | 204 |

This table is of interest as showing the type of changes that have been made in the Formulary, but it does not represent the progress of pharmacy in that period because it takes no note of the changes in the Pharmacopœia during the same time. When the first National Formulary was issued the sixth revision of the Pharmacopœia was in effect. This contained preparations corresponding to those in the National Formulary and which were not duplicated. In the next revision of the Pharmacopœia the influence of the Formulary began to be recognized and the Pharmacopœia commenced that policy which has gone on with increasing speed, *viz.*, that of reducing formulas and increasing simples. It was assumed that the Formulary would include the formulas that the Pharmacopœia dropped, and for a time this followed. In the last two revisions the Formulary has not taken up all formulas that the Pharmacopœia has discarded, but has placed them on the same basis as its own or new formulas. This has resulted in the last revision of about half of the formulas which the Pharmacopœia dropped being allowed to go into official oblivion.

So to indicate more definitely the progress which pharmacy has made, as shown by the formulas which were in good standing thirty-eight years ago, and are also recognized to-day, the following table is offered.

TABLE SHOWING THE NUMBER OF PREPARATIONS RECOGNIZED IN 1888 AND IN 1926.

| | U. S. P. VI. | N. F. I. | Totals. | U. S. P. X. | N. F. V. | Total. |
|---|---|---|---|---|---|---|
| Decoctions | 2 | 1 | 3 | (1) | 0 | (1) |
| Elixirs | 1 | 86 | 87 | 2 | 65 | 67 |
| Emulsions | 0 | 17 | 17 | 3 | 5 | 8 |
| Extracts | 32 | 2 | 34 | 14 | 14 | 28 |
| Fluidextracts | 79 | 51 | 130 | 26 | 104 | 130 |
| Infusions | 5 | 2 | 7 | 1 | 4 | 5 |
| Liniments | 10 | 8 | 18 | 5 | 12 | 17 |
| Liquors | 26 | 41 | 67 | 23 | 37 | 60 |
| Mixtures | 11 | 24 | 35 | 2 | 13 | 15 |
| Mucilages | 5 | 3 | 8 | 2 | 2 | 4 |
| Ointments | 26 | 5 | 31 | 18 | 19 | 37 |
| Pills | 5 | 27 | 42 | 5 | 23 | 28 |
| Plasters | 17 | 3 | 20 | 6 | 2 | 8 |
| Powders | 9 | 15 | 24 | 6 | 13 | 19 |
| Spirits | 21 | 12 | 23 | 13 | 11 | 24 |
| Syrups | 33 | 35 | 68 | 18 | 37 | 55 |
| Tinctures | 73 | 32 | 105 | 40 | 55 | 95 |
| Troches | 16 | 0 | 16 | 2 | 2 | 4 |

This table shows some very interesting comparisons. For instance the number of fluidextracts in vogue then and now, is just the same, 130 recognized in each period. The number

of tinctures is now ten less than then—or 95 as compared to 105. Extracts have disminished somewhat, and so have syrups, emulsions, powders, etc. But liniments and ointments are evidently used in quite as varied number as formerly.

Taken altogether the table indicates that most of the old-fashioned pharmaceutical preparations are as much in use to-day as they were thirty-eight years ago—and that in spite of the influx of synthetics, endocrine products and biological remedies. The official books do not indicate how much of the remedies are in use, but they do indicate that there is a continued and active demand for the time-honored vegetable preparations, both for internal and for external use.

Attention is so strongly drawn to the newer methods of treatment that the impression is easily made that the old-fashioned remedies and methods of treatment are slowly becoming obsolete. This comparison does not support that impression. In fact, if we were to step outside of the province of this paper, it could be easily shown that there is now developing a new interest in natural botanical remedies, as shown by the recent researches on ephedra, and the inauguration of new searches for vegetative remedies as yet unrecognized.

When after thirty-eight years of the most rapid development that pharmacy and medicine has ever experienced we find that 45 per cent—nearly one-half—of the original National Formulary preparations are still in active demand, it speaks much for the judgment and foresight of that first Committee. If their selections had not been as wise, and their work as thorough, it is very doubtful if the Formulary would occupy the position that it does to-day. And their work has been an example and a stimulus to the committees who have followed. A sure and sound foundation is an incentive to better work and greater satisfaction.

### THE PRESENT.

The Fifth Edition is now presented for judgment. The first copies appeared in the market in May 1926, which is several months later than the Committee expected when the date was set for it to become official.

The manuscript for Part I was sent to the printer on February 13, 1925, that of Part II was sent August 19, 1925, and Part III was sent September 31, 1925. When the last manuscript was sent it was expected that three months would be sufficient for completing the printing, since Part III could be pushed much more rapidly than the other two parts, it not requiring so many proofreaders—and that the book would be ready for distribution before February 1926. But in spite of efforts to hurry the printing along the work proceeded slowly and the manuscript for the index could not be sent until February 12, 1926—almost exactly a year after the first manuscript was delivered, and considerably later than was anticipated when the last of the text was delivered.

This explains how it happened that the date for becoming official was made so close to the appearance of the book in the market. An interval of about six months was intended.

As in the previous edition, the book is divided into three parts. A detailed discussion of the changes is not necessary since they are listed in the book itself. Some explanation of the more outstanding changes is here offered briefly. The particular features in Part I which are of interest are:

*Ampuls.*—It was not anticipated that the addition of a chapter on this subject, and of seven individual formulas, would lead to any very general use of the formulas by retail pharmacists. But a definite idea of the properties of these preparations, and of the care needed in their preparation is offered, and may be of service to many.

*Tablets* are similar. To manufacture these economically requires machinery and power which are not ordinarily available. Most of the new tablets take the place of corresponding troches and when prepared in quantity are much more economical. These formulas will help to unify formulas and will serve as standards.

*Wines* are all eliminated; but one wine—that of beef and iron is reformulated into an elixir, and three are changed into weakly-alcoholic tinctures with the privilege of using these when the corresponding wines are ordered.

*Dental and veterinary* formulas have been added with the coöperation of special committees from the National Dental Association and the American Veterinary Medical Association. It is hoped that these formulas will prove to be of special service to the professions involved, and that this may be the beginning of a greater coöperation with medical and allied societies.

*Dose Equivalents.*—The first two editions of the National Formulary did not give average doses, but did give the approximate quantity of the active constituents of the liquid preparations in grains per fluidrachm. In the third and fourth editions this was dropped, and now in the fifth edition it is again taken up, but with this difference—that the present edition gives average doses in both the metric and apothecaries systems, and the average dose equivalents are therefore stated in both systems. This double statement involves factors that have not previously been considered and questions have already arisen regarding them. Even while the book was in the proof-reading stage criticism began to be made of supposed inconsistencies in the dose statements. Thus it was pointed out that on page 20 the statement is "0.28 Gm. or 4 grains," on page 193 it is "0.24 Gm. or 4 grains" and on page 29 "0.24 Gm. or $3^1/_2$ grains." Likewise on page 20 it reads "0.07 Gm. or 1 grain," on page 193 it says "0.06 Gm. or 1 grain" and on page 47 it is "0.06 Gm. or $^5/_6$ grain." So the question is asked, "why the inconsistencies?"

But are these inconsistencies? The editor thinks not.

It must be remembered that we are dealing with two systems, that the average doses are given in two systems, and that these average doses are not equivalents. Thus for liquids an average dose will frequently be "4 cc. or 1 fluidrachm," while 4 cc. is actually 1.08 fluidrachm, or for solids "4 Gm. or 60 grains" when 4 Gm. is really 61.7 grains (1.028 troy drachm).

The first thing to consider is—what plan should be followed in making the dose statements? Four plans are open: (1) we can give roughly approximate quantities in both systems; (2) we can give the quantities in one system and ignore the other; (3) we can calculate the quantities in one system and give equivalents of these calculations in the other system; or (4) we can calculate the quantities in each system separately.

The first plan, to give roughly approximate quantities—has some strong advantages. For the larger quantities, fractions of a grain, or the second decimal in metric may be rounded out. For very small quantities, as the doses of strychnine, arsenic, etc., the more easily remembered fractions may be used and the splitting of these ignored.

Thus the dose statements would make each ingredient as 0.05 Gm., 0.1 Gm., 0.2 Gm., 0.5 Gm., 1.0 Gm., etc., or as 1 grain, 2 grains, 5 grains, etc., or as $^1/_4$ grain, $^1/_8$ grain, $^1/_{60}$ grain, $^1/_{120}$ grain, etc. This plan would be serviceable to the physician because it can be made sufficiently accurate for his needs and more easily remembered. It has some real advantages from the service standpoint. But it would have to ignore the differences in formulas, such as occur when 80 Gm., or 85 Gm., or 87.5 Gm. of an ingredient respectively is used to make 1000 cc., and in each case report that a teaspoonful dose (1 fluidrachm) contains 5 grains of these ingredients. Careful checking would be needed to carry out this plan and make the results appear consistent. But it has some points of superiority, and is well worth consideration.

The second plan—to calculate in one system and ignore the other is not consistent with the average dose statements, and the third plan is in the same situation. The figures, by either of these would be consistent, but the plan itself would not. Inconsistency in a plan is worse than inconsistency in an individual case, so the second and third plans were ruled out.

The fourth plan was adopted, and when this is consistently followed a seeming inconsistency in some individual quantities must necessarily occur. The criticisms quoted show this.

On page 193 we have Powder of Aloe and Canella, which is composed of 4 parts (80 Gm.) of aloe and 1 part (20 Gm.) of canella, by weight. The dose is then given as 0.3 Gm. or 5 grains. A simple calculation shows that $^4/_5$ of 0.3 Gm. is 0.24 Gm., and $^1/_5$ of 0.3 Gm. is 0.06 Gm. Also that $^4/_5$ of 5 grains is 4 grains and $^1/_5$ of 5 grains is 1 grain. Hence the statement that each average dose contains 0.24 Gm. or 4 grains of aloe, and 0.06 Gm. or 1 grain of canella is correct.

Now take corresponding quantities in the Elixir of Five Bromides on page 20. Here we have 70 Gm. of potassium bromide and 17.5 Gm. of ammonium bromide in 1000 cc., and the average dose is given as 4 cc. or 1 fluidrachm. For the metric dose equivalent the calculation is simple, because 1 Gm. and 1 cc. are equivalent for all practical purposes. Hence 4 cc. will contain $70 \times .004 = 0.28$ Gm., and $17.5 \times .004 = 0.07$ Gm. But in the apothecaries system the calculation is not so simple because grains and minims are not equivalent.

We now have 70.0 Gm. or 1080.3 grains of potassium iodide in 1000 cc. or 16231 minims and the dose is 60 minims. Then we calculate as follows: 16231 min.: 1080.3 grs.: 60 min.: 3.994 grs.—or practically 4 grains. And we have 17.5 Gm. or 270.12 grains of ammonium bromide in 1000 cc., or 16231 minims, and in a dose of 60 minims we will have:

16231 min. 270.12 grs.:: 60 min.: 0.998 gr. or practically 1 grain.

Hence the dose statement that in one average dose there is 0.28 Gm. or 4 grains of potassium bromide and 0.070 Gm. or 1 grain of ammonium bromide is also according to the facts, though the figures do not agree with those on page 193. The apparent discrepancy is due to the fact that we are dealing with two different systems, which do not correspond in their weight-to-volume relations, and also with two different average doses. The figures for 4 Gm. of a dry or solid body in drug measure will correspond to 4 cc. in liquid measure, but the figures for a dose of 60 grains will not correspond to those of a dose of 60 minims, because the doses are not equivalent.

Whether the best plan has been adopted is open to question, but the figures as given are entirely consistent with the plan.

PART II.

Part II is intended, as before, to contain only materials used in the formulas in Part I for which the Pharmacopœia provides no standard. The contents of Part II are automatically regulated by the formulas of Part I. But the present edition does contain one article—Calcium Lactophosphate—which is not used, as such, in Part I. In the preceding edition this was employed in making elixir and syrup of calcium lactophosphate and syrup of calcium lactophosphate with iron. In the present revision the salt is made during the process of manufacture from calcium carbonate, lactic and phosphoric acids, and the editor overlooked this change. Attention was called to it when the book was ready for casting into plates. To delete it then would have caused a considerable delay in the appearing of the book, because more than 200 pages would need to be rearranged and renumbered, and the editor deemed the earlier publication of more importance than the error of inclusion. The main objection to its continuance, is that it violates the principle which governs the revision of Part II. This principle is a distinguishing feature between the Pharmacopœia and the National Formulary and it is important that it be observed. That is the unfortunate factor in this editorial oversight.

PART III.

Most of this part of the book is new. The first portion, treating of reagents and tests is taken from the Pharmacopœia and supplies the special details that are needed to carry out the tests directed on the various drugs, chemicals and preparations.

*The Diagnostic Reagents* is a revision of the corresponding chapter in the U. S. P. IX. Pharmacists are often called upon to supply these reagents and the main purpose of this portion of the book is to supply standard formulas for them. It will be worthwhile for pharmacists to get acquainted with this portion of the book, at least well enough to recognize the reagents whenever they may be demanded or referred to.

*The Tables of Menstrua and of Alcohol Strengths* will be more useful to manufacturers than to retail pharmacists. The last is necessary in interstate commerce, but for local sales it has little purpose except as an added indication of the proper preparation of the article, as an official article.

*The Table of Average Doses* is an experiment. Whether it will be more convenient to consult a table than the individual article may depend partly upon habit and partly upon whether one or several doses are desired. For study it is likely to be of especial service.

*The Table of Solubilities* has an added advantage in that it includes most of the soluble chemicals of the Pharmacopœia as well as of the National Formulary. Most of these chemicals are used in N. F. preparations, which warrants their inclusion in one table. This table is so arranged that the solubilities in various solvents used in prescription work are all together and can be quickly compared or found.

The last table, that of the *Relation of Active Components*, is entirely new. This table is designed to show the various official preparations into which each medicinal agent enters. It is not, however, a table of ingredients, as some have thought, but of constituents. For instance, calomel is an ingredient of black wash, but it is entirely converted into mercurous oxide by the calcium hydroxide solution, hence Lotio Nigra is not listed under mild mercurous chloride, but under mercurous oxide. The first column therefore lists a number of chemicals which are not official in either the U. S. P. or the N. F. but which are formed by reaction in the preparations and are therefore a constituent.

Physicians may find this table of value as suggesting the various methods of administering a given remedy, or of various combinations which contain it. Pharmacists, and particularly students, may find it of value as distinguishing between the ingredients and the composition of a preparation. It also shows the variety of preparations which serve to administer any particular remedy.

The real usefulness of this table remains to be found. One prominent educator advised against its printing when the proofs were distributed, stating that it meets no need and cannot be made correct in statement. Perhaps he is right. There is no present known demand for such a table, but it may be useful nevertheless. There was no known demand for automobiles forty years ago.

As for accuracy—in the complete sense this is impracticable because most official formulas are made according to approximate stoichiometrical relations and there will be a slight excess of some ingredient which is not mentioned in the table. This does not affect the main facts, however.

This table may, possibly, tempt some examiners to use it to entrap unwary candidates. This would be an unfortunate use. No such purpose is intended, of course. But it may prove useful, either to physicians in prescribing or to young pharmacists in studying official preparations. It is also suggestive of the different functions of the Pharmacopœia and the National Formulary.

THE COMMITTEE OF REVISION has been very fortunate in having been able to finish the work of revision with its original organization unchanged. It is not the usual record. We have been well favored in that we have thus far sufficed no losses by death or resignation.

It may not be out of place for the Chairman to indicate the general calibre of the Committee by stating that since the beginning of the work two members, Messrs. Hilton and Arny have been elected to and have served as President of the ASSOCIATION, and the Committee now includes four Ex-Presidents of the A. PH. A. Three have been honored with the Remington Medal —*viz.* Messrs. Beringer, Arny and Dunning, two have received the Ebert prize, and five (one-third of the Committee) have received honorary degrees from educational institutions—one of these, Mr. Seltzer having received two honorary degrees from different schools within a period of one week. These honors are additional to recognitions made to other members before the organization of this Committee. All of which simply shows that the ASSOCIATION exercises care and discretion in the selection of its committees.

## THE FUTURE.

The Formulary is conspicuously lacking in standard tests for identification and quality of the preparations in Part I. Except for the liquors, the assayed alkaloidal preparations, and a few individual preparations, the formula given is the only standard. When the formula is followed there is little chance of the preparation being wrong, but the Formulary gives no help in the line of determining whether the formula has been followed.

The present revision has made a beginning in the establishing of alcohol tolerances for all of the preparations containing alcohol, and in instituting descriptions and physical and chemical tests for the liquors. But the task of extending this to all of the preparations is too great for one committee and the time of a revision. The Formulary contains 549 preparations, of which only 62—or about 11 per cent—offer any description or test, and about two thirds of these were added in the revision just completed.

Many of the preparations will need only a description—some not even that—and one or two constants or tests. But some will need considerable work.

The fluidextracts and tinctures which are not standardized for alkaloid or resin or by a biological assay should have limits set for extractive and specific gravity. This requires that a number of samples shall be prepared of each kind, and tested, and the tolerances established from as many different samples as possible. These preparations alone would make an onerous task for a small committee, and an expensive one as well, but here is a case where "many hands make light work," and we need but to use the results which are already being obtained but may not be completed or reported.

The distribution of proofs to teachers in our pharmacy schools and to manufacturers confirmed the belief that these are already interested in the National Formulary and are willing to

coöperate in efforts to improve it. That willingness should be organized and turned into results that will benefit, not only the Formulary, but pharmacy as a whole. Credit must be given for such coöperation, and the results used in the next revision. The greater the number of preparations made, and the more varied the workers, the more reliable will be the results.

The following suggests some of the needs which can be met by coöperative work.

*Acids.*—Assays and stability tests.
*Ampuls.*—Assay methods and tests for sterility.
*Collodions.*—Specific gravity and residue standards.
*Elixirs.*—Descriptions, specific gravity and special tests of identity or strength.
*Emulsions.*—Identity tests and oil estimations.
*Extracts.*—Identity tests.
*Fluidextracts.*—Specific gravities, extractive range, alcohol tolerances, identity tests.
*Fluidglycerates.*—Specific gravities, identity tests.
*Glycerites.*—Specific gravity, identity tests.
*Glycerogelatins.*—Assay processes and standards.
*Liniments.*—Specific gravities, descriptions. Special tests for identity or strength.
*Liquors.*—Check up present standards and tests.
*Mixtures.*—Descriptions, special tests.
*Nebulae.*—Specific gravity, special tests.
*Oleates.*—Assay.
*Oil, Phosphorated.*—Assay or identity tests.
*Petroxolins.*—Pharmaceutical advantages. (It does not seem to be generally known that Solid Petroxolin is pharmaceutically the best base for the presentation of Peru Balsam in ointment form. It is the only base which will make a permanently smooth mixture in all proportions. Other advantages of the Petroxolins need to be developed.)
*Powders.*—Special tests of identity or strength.
*Effervescent Salts.*—Reaction of solution.
*Spirits.*—Specific gravity, oil determination, identity.
*Syrups.*—Specific gravity, assay methods, identity tests.
*Tablets.*—Assay methods, identity tests.
*Tinctures.*—Specific gravity, extractive limits.
*Ointments.*—Assay methods, identity tests.

Stability tests and methods of stabilizing are needed on many of the N. F. preparations. Standards have been developed in recent years, but the maintenance of standards has been neglected. We are depending as much upon tradition as upon science for the directions for storage of pharmaceutical preparations in the N. F.

We need to know more about the changes that take place in many of the preparations, and to learn how to minimize or prevent such changes. In biological medication, such preparations as cannot be made to hold their potency indefinitely are outlawed after a definite time. Instability in galenical or chemical preparations should also either be corrected or recognized in a similar way. The only value that standardization possesses is the securing of uniformity and reliability, and if the latter does not hold the value is half gone. Too little attention has been paid to the stabilizing of pharmaceuticals—although some progress has been made in that line during recent years.

Finally propaganda is needed. This is a "gas" age. Business depends upon "gas" for its motor power as much as does the automobile, though the source and variety is different. But the refilling and use is just as necessary. There are so many things to know these days that only the aggressive teachers get their points implanted.

The first section of this report shows that the old line remedies are still in strong demand. There are no indications that the next forty years will see them dropped. Many a preparation in the N. F. is running slow under momentum the push of which has ceased. Some should be allowed to die, because they are irrational or have been superceded by better remedies. Some are unappreciated because their virtues are not known. Their presence in the N. F. alone will not suffice. If anybody is to profit by them, some pushing must be done.

This is the retail pharmacist's part. The revision committee may help, but it cannot lead in this work. The N. A. R. D. has recognized this need and is doing good work. Isn't it a bit strange that the A. PH. A., which has a primary interest in the N. F. and its welfare has done nothing on this line? There's room for both organizations in this work without conflict. Co-operation is better still.

What shall be the future of the National Formulary? Neither the prestige of the A. PH. A. alone, the efforts of revision committees, however competent and wise, alone, the critical help of the colleges or of professional experts alone, or the propaganda of organizations and pharmacists alone, can decide. But the coöperative interests and efforts of all of these will make it a greater and sounder influence in pharmacy, and a distinguished credit to the ASSOCIATION and to pharmacy.

# CORRESPONDENCE

## CONTRIBUTIONS TO THE AMERICAN PHARMACEUTICAL ASSOCIATION BY INDIVIDUALS ARE DEDUCTIBLE IN DETERMINING TAXABLE INCOME.

The following letter from the Office of the U. S. Commissioner of Internal Revenue is of more than usual and of general interest. Contributors to the AMERICAN PHARMACEUTICAL ASSOCIATION for the Headquarters (and for its other activities) may deduct the amount donated in arriving at their taxable net income, in the manner and to the extent provided by Section 214 (*a*) (10) of the Revenue Act of 1926.

November 8, 1926

AMERICAN PHARMACEUTICAL ASSOCIATION,
Long Building, Baltimore, Maryland.
SIRS:

Reference is made to the evidence furnished by you in support of your claim to exemption from Federal taxation.

The evidence submitted discloses that the ASSOCIATION was organized in Philadelphia, Pennsylvania, in 1852; that it was incorporated under the laws of the District of Columbia on February 21, 1888, to unite the educated and reputable pharmacists and druggists of America in the following objects:

1. To improve and regulate the drug market by preventing the importation of inferior, adulterated, or deteriorated drugs and by detecting and exposing home adulterations.
2. To encourage such proper relations among Pharmacists, Druggists, Physicians and the people at large, as many promote the public welfare, and tend to mutual strength and advantage.
3. To improve the science and art of Pharmacy by diffusing scientific knowledge among Pharmacists and Druggists, fostering pharmaceutical literature, developing talent, stimulating discovery and invention, encouraging home production and manufacture in the several departments of the drug business.
4. To regulate the system of apprenticeship and employment, so as to prevent, as far as practicable, the evils flowing from deficient training in the responsible duties of preparing, dispensing and selling medicines.
5. To suppress empiricism, and to restrict the dispensing and sale of medicines to regularly educated Pharmacists and Druggists.
6. To uphold standards of authority in the Education, Theory and Practice of Pharmacy.
7. To create and maintain a standard of professional honesty equal to the amount of our professional knowledge with a view to the highest good and greatest protection to the public.

It is stated that the ASSOCIATION consists of active, life and honorary members; that it has approimately 4800 members, of whom 13 are honorary members and approximately 105 are life members and that the annual dues are $5.00 per year. The ASSOCIATION desires the improvement of the profession of phramacy and to secure for the public a proper pharmaceutical